The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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MR. JAMES H. CROFTS, STOCK AND SHARE BROKER,
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Accounts opened for the Fortnightly Settlement.

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RAILWAYS.—SPECIAL BUSINESS. Fortnightly accounts opened on receipt of the usual cover.
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Purchases and Sales negociated in Unmarketable Stocks and Shares.

Speculative Accounts opened for the Fortnightly Settlement.

References given and required when necessary.

A Stock and Share List forwarded to *bona fide* Investors free on application.

Bankers: The National Provincial Bank of England, E.C.

SPECIAL BUSINESS in the undermentioned, at close market prices:—

Assheton.	Emma (Silver).	Roman Gravels.
Bog.	Flagstaff.	Richmond.
Birdseye Creek.	Frontino.	South Condurrow.
Carn Brea.	Gold Run.	Sweetland Creek.
Cape Copper.	Javali.	St. Patrick.
Cathedral (Copper).	Ladywell.	Tankerville.
Chapel House Colliery.	Marke Valley.	Tincroft.
Chicago (Silver).	Pennerley.	Van.
Dolcoath.	Parys Mountain.	Van Consols.
Don Pedro.	Penstruthal.	West Chiverton.
Devon Consols.	Pateley Bridge.	West Tankerville.
Eberhardt.	Port Phillip.	Wheal Uny.

FOR SALE, at prices annexed:—

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Chapel House.	Cardiff and Swansea.	Direct Cable.
Cape Copper.	Richmond.	Lawe's Chemical.

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30 Bedford Unit., 19s.	50 Gold Run, 15s.	100 Parys Mount., 12s. 6d.
80 Bog, 7s. 6d.	25 Hingston, 18s. 3d.	20 Richmond, £9 3s. 9d.
25 Birdseye Creek, £17⅜.	60 Javali, 13s.	40 Sweetland, £2⅞.
60 Chontales, 11s. 3d.	25 Ladywell, £2 12s.	100 So. Roman Grav. 7s 9d
50 Cathedral, 25s.	50 Last Chance, 19s. 6d.	20 So. Tolcarne.
20 Chapel House, £4¼.	25 Marke Valley, £3 1s.	50 St. Patrick, 22s. 6d.
40 Don Pedro, 12s. 9d.	30 Monydd Gorddu, £6½	25 So. P. Patrick, 41s. 3d.
100 Exchequer Gold, 12s.	20 N. Quebrada, £3 11s 3d	50 Van Consols, £1⅞.
35 Emma, £1⅝.	90 Prince of Wales, 3s. 9d.	100 West Maria, 5s. 6d.
20 Eberhardt, £8¼.	60 Port Phillip, 16s.	25 West Godolphin, 25s.
25 Frontino, 25s.	20 Pateley Bridge, £6 6 3	30 W. Tankerville, 27s 6d
30 Gunnislake, 45s.	75 Penstruthal, 11s. 3d.	100 West Milwr, 4s.

INVESTMENTS IN STOCKS AND SHARES.—
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Birdseye Creek	1¾	1⅞	Penstruthal	10s.	12s.
Bog	6s.	8s.	Plynlimmon	8s. 6d.	9s. 6d.
Chapel House	4	4½	Port Phillip	14s.	16s.
Devon Great Consols	2⅞	3	Richmond	£ 9⅛	£ 9⅜
Dolcoath	45	47	Roman Gravels	12½	13
Don Pedro	11s.	13s.	St. Patrick	1	1¼
Eberhardt	8¼	8½	South Carn Brea	1¾	1⅞
East Caradon	1⅞	2⅛	South Condurrow	5¼	6
East Lovell	7¼	7½	So. Roman Gravels	5s.	7s. 6d.
Flagstaff	18s.	21s.	Sweetland Creek	2¾	3
Frontino	1¼	1⅜	Tankerville	10½	11
Gawton	11s.	13s.	Tincroft	25	26
Gold Run	14s.	16s.	Unity Wood	17s. 6d.	22s. 6d.
Hingston Down	15s.	17s.6d.	Van	28	30
Javali	12s.	14s.	Van Consols	1¾	2
Marke Valley	2⅞	3	West Chiverton	16½	17½
New Quebrada	3¼	3½	West Maria	4s. 6d.	5s. 6d.
New Rosario	4s.	5s.	West Tankerville	1¼	1⅜
Parys Mountain	11s.	13s.	Wheal Crebor	3	3¼
Pateley Bridge	6	6¼	Wheal Grenville	2½	3
Pennerley	1⅜	1⅝	Wh. Kitty (St. Agnes)	3	3¼

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75 Almada, 11s. 6d.	100 Gold Run, 17s.	20 Russia Copper, £3.
40 Australian, £2½.	20 Gawton, 12s. 6d.	30 Richmond, £9¼.
100 Birdseye, £17⅜.	5 Great Laxey, £16.	25 Roman Grav., £12 6 3
50 Bog, 7s. 3d.	50 Hingston, 18. 6d.	50 Sweetland, £2 16s. 3d.
40 Chontales, 11s. 3d.	75 Javali, 12s.	75 St. Patrick, £1 2s. 6d.
75 Chapel House, £4¼.	50 Ladywell, £2 13s. 9d.	50 So. Tolcarne, 10s.
50 Cathedral, 26s.	30 Linares, £4 1s. 3d.	25 So. Condurrow, £6¼.
20 Devon Consols, £3¼.	70 Marke Valley, £3 3s 9	20 Tankerville, £10¾.
2 Dolcoath, £48.	50 Monydd Gorddu, £6½	5 Van, £29.
75 Don Pedro, 13s. 6d.	70 Plynlimmon, 8s. 6d.	50 Van Consols, £1 16s 3d
40 Eberhardt, £8¾.	50 Pateley Bridge, £6¼.	25 W. Tankerville, 26s 3d
50 E. Caradon, £2 3s. 9d.	30 Parys Mount., 11s. 6d.	5 W. Chiverton, £16 18 9
25 Fortuna, £5 2s. 6d.	75 Penstruthal, 11s. 6d.	25 West Maria, 5s. 3d.

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Every information furnished upon all British and Foreign Mining Companies, and a carefully-selected List of the best Dividend and Progressive Shares forwarded post free upon application.

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October 7, 1875.

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Original Correspondence.

THE VISIT OF THE NORTH OF ENGLAND ENGINEERS TO YORKSHIRE.

Saturday last saw most of the mining and mechanical engineers of the Northern Institute on their way homewards from Sheffield, after a most agreeable, and no doubt beneficial, visit to Yorkshire of three days, during which they inspected several of the principal collieries and iron and other works in the West Riding. They expressed themselves exceedingly gratified at the warm and genial welcome they received, and the profuse and magnificent hospitality which was shown them wherever they went, culminating, as it did, with a splendid banquet at the Cutler's Hall, Sheffield, on Friday night. It may also be said that on the previous evening they were entertained at an elegant dinner at the King's Head Hotel, Barnsley, at which Lord Wharncliffe and Mr. W. S. Stanhope, M.P., two of the largest mineral owners in the district, were present. On Friday the party was met at Sheffield by several of the leading colliery owners and manufacturers of Sheffield, and a series of visits previously fixed upon were at once carried out. A goodly number of the gentlemen interested in mining proceeded to the Shireoaks Colliery, near Worksop, about the most important in the entire coal field, being not only the deepest but the first that has been sunk through the magnesian limestone to the Barnsley or top hard coal, which was reached at a depth of 510 yards. The thickness of the magnesian limestone at Shireoaks is 318 ft., whilst near to Doncaster it is as much as 360 ft. At the former place, also, the sinkers went through the full thickness of 327 ft. of the Permians. The seam of coal also varies very much from what it is in the northern part of the field, for at Barnsley, Wombwell, and also at Mexbro', it ranges from 8 to 9 ft. in thickness, whilst at Shireoaks it is only 3 ft. 10 in. The section gives 10 in. of soft coal, 10 in. hards, 3 in. bright, 12 in. spray or mixed, and 11 in. softs. The engines and machinery are all on an extensive scale, the hauling-engines at the bottom being 350-horse power, working an endless wire-rope with Fowler's patent clip pulleys. A new shaft is being sunk near the present ones, by which the output will be greatly increased. It is on the estate of the Duke of Newcastle, who is the lessor of the entire field, and the colliery has the advantage of being about the nearest there is to Grimsby. The party then proceeded to the Kiveton Park Colliery, a very large concern, of which Mr. Carrington is the head, and only a short distance from Shireoaks. The same seam of coal—the Barnsley or top hard—and is only something like 3 ft. 8 in. thick. The output is about 1200 tons per day, but considerable extensions are being made, by which the production will be very largely increased. At present the underground haulage is accomplished by horse-power, but powerful engines are about to be put down, whilst for ventilation two Guibal fans are being constructed, to be worked by two 35-inch cylinder engines. The Nunnery Colliery, formerly belonging to the Duke of Norfolk, was also visited, and some of the persons descended into the workings. At this place two seams of coal are worked—the Parkgate and the well-known Silkstone. A good deal of water is made, but the pumping-engines are on an extensive scale, and sufficient to keep all clear. There is a very powerful beam-engine of 300-horse power, with a very large cylinder, also excellent drawing-engines fitted with Cornish valves. Next the party visited the vast works in Saville-street of Sir J. Brown and Co. (Limited), so well known for their vast armour plates and Bessemer steel. Here there was much to be seen, and the visitors were evidently deeply interested, and had the rare opportunity of witnessing the rolling of a 20-ton plate 11 in. in thickness, which is, however, not the maximum thickness produced by the company. The Bessemer department was also in operation in casting ingots and rolling as well, so that there was an opportunity of witnessing a sight such as could not be seen at any other establishment in the kingdom.

Of the many subjects of interest brought under the notice of the members of the two bodies, the paper or address of A. H. Green, Esq., M.A., Professor of Mining and Geology in the Yorkshire College of Science, on the "Variations in the Thickness of the Barnsley and Silkstone Seams," was undoubtedly one of the most interesting and attractive, so that no apology is necessary for giving a *resumé* of it. Mr. Green said, if they examined the Silkstone coal they would see that it was what might be described as a double coal, consisting of two beds averaging 2 ft. 6 in. It kept up that character until it came near to Cawthorne, when a very important change took place. It there became several beds of coal with dirt parting—the beds of coal diminishing in thickness and the dirt increasing—and he had very little doubt if it were traced out they would find the beds wear away altogether. If they went down to the southern boundary of Yorkshire, about nine miles south of Rotherham, they found the Silkstone seam there of good quality, but moderate in thickness, its average being 1 ft. 2½ in., with dirt 1 ft. 9 in. There were two thin coals separated by a thin dirt. At a point six miles south-west of Rotherham the Silkstone seam was probably at its best, for at the top there was a branch coal, beautifully clean, somewhat approaching to cannel, 1 ft. 2 in. thick, ordinary coal 1 ft. 4 in., 7 in. dirt, and a bottom bed of coal 3 ft. 7 in. thick, making altogether 6 ft. 1 in. of coal. Between Sheffield and Rotherham they had a top and bottom coal of, perhaps, a little less than the average thickness, with increase in the dirt parting. Then, as they went north-west in the direction of Chapeltown, they found the dirt parting swelling out as they went along, and increasing to such an extent that at one point it was 10 yards thick. About the neighbourhood of Silkstone, and between there and Cawthorne, the dirt parting increased in thickness and split up the coal into a number of sub-divisions, the coal itself decreasing in thickness. At Cawthorne the coal at the top was 1 ft. 4 in., the dirt 1 ft. 9 in.; then coal 8 in., as if the top seam had got divided. They then had a parting of stone and shale ranging up to 7 or 8 yards, and a seam of coal at the bottom about 1 ft. 9 in. thick. Going a little farther to the north-west there was again a change, the section giving top coal 1 ft. 10 in., a different one 1 ft. 4 in., dirt 2 ft., then a thin coal 9 in. thick. After that they had a parting of dirt 7 or 8 yards thick, and then they found the bottom coal, instead of being in one seam, split into two, giving at the top 1 ft. 5 in. of coal, dirt 4 in., and coal 5 in. Such were some of the changes which the valuable seam of Silkstone presented, but he could say that, excepting at the places where the dirt was very thick, the coal was good.

Proceeding to notice the valuable seam of coal known in Yorkshire as the Barnsley, and in Derbyshire and Nottingham as the Top Hards, Mr. Green said that in the neighbourhood of Sheffield it was only about 4 ft. or 4 ft. 6 in. thick, but became thicker as it proceeded to Rotherham, whilst about Barnsley it was found at its best from 9 to 10 ft. in thickness, and even more going a little to the north of that town; the coal was of good quality, but the dirt thickened considerably. Proceeding still further to the north, at Crigglestown Station the coal was tremendously split up by dirt partings, and utterly worthless, and the further they proceeded in that direction the worse it became. At Warren House, Wakefield, it was a mass of coal and dirt. At Sheffield there were three divisions of the bed—the top or soft 1 ft. to 1 ft. 8 in., hard coal 1 ft. 6 in. to 2 ft., and bottom softs varying from 2 in. to 1 ft. Proceeding towards Elsecar the seam thickened considerably, the top softs being from 1 ft. 6 in. to 3 ft., hards 3 ft. to 4 ft. 6 in., and the bottom softs from 1 ft. 4 in. to 2 ft. Between Elsecar and Barnsley a dirt parting came in, called the clay seam, consisting of clay and shale, ranging from 4 in. to 1 ft. As the seam proceeded to the north it gradually became inferior, broke up by dirt partings until it disappeared. These dirt partings were easily explained. It was admitted on all hands that coal was a vegetable deposit, so they had in the first instance got a layer of vegetable matter spread over a large area transformed into coal. The land not being much above the sea level, so that if it were let down a little the water would overflow it, along with sand, so that they got a layer of sand spread over the entire area of the decomposed vegetable matter or coal. Then with a fresh growth of vegetation they would have another layer of coal above the sand, and so on. That accounted for the dirt partings in coal, and how those partings thickened out was easy of explanation. If they supposed that a bottom bed of coal sank down, but not uniformly so but irregularly, and the water covering it reached to a certain extent, they would have all the hollows filled up more or less with sediment, and when the next coal formed on the top of it the result would be a coal bed with a thin parting at one place and a thick one at another.

With respect to what were termed rock faults, they were also easily explained by supposing a stream of running water to cut a channel, and that channel filled up with sand or mud, which ultimately became rock. With regard to the gradual disappearance of the coal beds, such as he had alluded to, and to the difference of the seams of coal in one locality to what they were in another. He would take the word peat bog, and say that the Silkstone bog and the Blocking bog were not continuous, and if they assumed that the tract of land between the two was a little raised, and perhaps too dry to grow vegetable matter, they might have a low-lying tract of land called the Silkstone peat, and another (say) the Gawthorpe peat. Between those two there would be a raised ridge of land on which vegetable matter would not grow. The coal would grow rapidly enough on the low land, but as the dry country was approached where vegetable growth did not go on it would naturally thin away. At the same time, rain would be falling on the high ground, running down the slopes, washing the mud, sand, &c., into the hollows, by which they got a ridge of sand and gravel. Again, the low ground being flat, and the water not running over it with any velocity, it would not carry the sand far over the tract, and thus they got wedges of sand or mud. It might also happen that, owing to an increase of rainfall, a certain amount of vegetable growth was able to go on, so that on the higher land they would get a thin seam, whilst at the lower part of the ground the coal would go on without interruption, so that the seam would thicken out.—A vote of thanks was passed to Mr. Green, and the paper was ordered to be printed.

DYNAMITE AS A BLASTING POWDER.

The substitution of nitro-glycerine compounds for gunpowder in connection with blasting operations in mines has during the past few years so largely extended that a brief reference to the nature and efficiency of dynamite—the compound which has enjoyed the highest reputation amongst miners—will not be uninteresting. The enormous power of nitro-glycerine attracted the favourable attention of the whole mining community as soon as it was made know, but the lamentable accidents resulting from its transport, storage, and use, almost before it had time to come fairly into the market, led to such a strong reaction in the feelings regarding it, that the mere mention of nitro-glycerine being an ingredient in an explosive compound sufficed to ensure its condemnation, and but for the adoption of dynamite by Mr. John Hocking, of the St. John del Rey Company, and one or two equally daring engineers—Mr. G. Mowbray and others—in America, it is probable that that compound, now so largely appreciated by all practical men, would have been passed by, at least by the present generation, as one of those materials of considerable scientific interest, but of no industrial value. Owing to the excellent results obtained in practice with dynamite the old prejudice against its use has nearly worn away, and it is now rapidly attaining a prominent place among the necessary materials of a mine.

Dynamite consists of nitro-glycerine absorbed in porous substances, and Mr. Nobel stated in his paper on Modern Blasting Agents, recently read before the Society of Arts, and for which a silver medal was awarded to him, that it is erroneously believed that it was discovered accidentally through a leakage of nitro-glycerine which had run into porous silica, known under the name of "kieselguhr." The first dynamite made contained no silica, it consisted of porous charcoal and nitro-glycerine, and numerous experiments were made with various absorbents, such as porous terra-cotta, sawdust, ordinary paper, and nitrated paper, soaked in the liquid explosive, and rolled into cartridges, before the porous silica was finally adopted. It absorbs practically from three to four times its own weight of nitro-glycerine, and possesses the valuable advantage over other absorbents of resisting a greater degree of pressure without parting with any of the nitro-glycerine it holds. At first the new blasting agent, although substantially of as good a quality as is manufactured now, made but slow progress, owing in a great measure to the strong prejudice existing against its chief ingredient. But it has gradually grown into favour, and numerous dynamite factories have sprung up, of which no less than fourteen are under Mr. Nobel's control. The figures showing the development of the dynamite trade during the eight years ending 1874 are not uninteresting. It appears that in 1867 but 11 tons were sold, whilst in the following years it increased first to 78 tons, then to 185 tons, next to 424 tons, and in 1871 it had reached 785 tons, a further increase to 1350 tons in 1872. During 1873 the sale reached 2050 tons, in 1874 it was 3120 tons, and the current year will, no doubt, show a corresponding increase. As these figures relate only to those factories under Mr. Nobel's own control the entire trade must have been very large, and it must be gratifying to those concerned to be able to state that, although last year the sales amounted to 600,000*l.*, not an accident during transport or storage occurred. The company look forward to the time when the restrictions on the carriage of the material shall be removed, so that the material can be sold at a price which will add much to the prosperity of the mining industry of the country.

That under certain conditions, otherwise similar, a quick explosion must be preferable to a slow one for blasting, and where blasting is the only object, must, Mr. Nobel remarks, be obvious; and he points out that of two explosives the more powerful one may, for want of quickness of combustion, be the less efficacious for blasting, and it becomes a matter of considerable importance to possess a ready means of overcoming the drawback of the slow action. That problem has been solved by adopting a special mode of firing explosives, known as the detonating ignition. It consists in applying a strong local explosion instead of a spark or flame, and it modifies in a remarkable degree the natural quickness of combustion exhibited by explosive substances. It is especially in connection with nitro-glycerine that this mode of ignition has led to remarkable results, and it was to suit the peculiar nature of that substance that it was invented. Nitro-glycerine, indeed, without that special firing, though it is an explosive, is no blasting agent, as it cannot be applied with any degree of certainty that it will go off. Not so when fired by a local explosion. It not only detonates without any confinement, but it affords an extraordinary facility for setting off substances which without its aid are absolutely inexplosive.

With regard to the nature of the action of the detonator cap, Mr. Nobel remarks that it is very complicated, and not easily explained. Some attribute it only to the heat produced by compression, some only to the heat of the gas given off by the fulminate of the cap, and others, again, to the disassociating power of a strong vibration. It is not, Mr. Nobel thinks, unlikely, at least in some instances, that all those influences are brought to bear on the explosion, but it would be very difficult indeed to compute the part contributed by each. There can be no doubt as to the dislocation of certain unstable compounds of vibration alone, since the slight shock which sets off chloride and iodide of nitrogen, perchlorate of ethyl, &c., cannot possibly raise their temperature even locally to the degree at which they explode. Even in the case of nitro-glycerine, which exhibits no such extreme sensitiveness, direct experiments have shown that very violent vibration can cause it to explode. But if vibration alone suffices to set off nitro-glycerine, it is still less doubtful that heat alone will do it. Not only does it detonate when raised to the temperature at which its constituent elements dissociate, but a minute charge of gunpowder, so slightly confined that the gas which it produces has a very feeble tension, never fails to make it detonate. It suffices, indeed, to apply heat in any shape, so that it acts upon a very large surface of nitro-glycerine, for then the gas evolved can no longer escape as quickly as it is produced, and the pressure, accumulating with immense rapidity, brings on the explosion. Nitro-glycerine preparations and guncotton cannot be brought to detonate by such means, but go off easily under the influence of a sharp local explosion, such as produced by a fulminate. Two opposite tendencies are here at work, one to set off the explosive, acting on it by heat, vibration, or whatever cause it may be, and the other to throw it away by the propelling impulse due to the expanding gas. Both must be extremely quick in operating, and it is, therefore, easy to see how a slight, apparently insignificant, difference may turn the scale, and cause an explosion or missfire. For instance, in grinding chlorate of potassium and sulphur with care in a mortar, a series of small detonations take place, which do not spread, but a somewhat stronger blow or friction will set off the whole. Evidently in one case the propelling power is preponderant over the igniting tendency, in the other it is not. Even the quickest substance requires time to get heated, and unless the velocity implanted allows that time combustion cannot take place.

It is mentioned that among the most grievous complaints of the miners about modern explosives, which more or less relate to their danger, is the poisonous nature of the fumes emitted, which in their opinion expose them to most serious inconvenience. Mr. Nobel points out that slight attention was paid at the beginning to those complaints, partly because if fumes are injurious miners must allow them time to draw off, or the proprietors must increase ventilation; partly, also, because it is almost impossible, with the notions of modern chemistry, to account for the existence of poisonous fumes. The great power of a detonating substance like guncotton or nitro-glycerine can only be explained by the high temperature of the gaseous products produced, and theory tells and practice proves that at very high temperatures no complex chemical combinations can exist. He explains that when a dynamite cartridge burns instead of exploding, the combustion takes place at a much lower temperature, and the nitric acid contained in the nitro-glycerine gives off only part of its oxygen, forming dioxide of nitrogen, which escapes, and in contact with the atmosphere gets converted into hypo-nitric fumes. It is easy to become convinced by actual experiment of the different atmosphere produced by a cartridge when burning or exploding. In the worst ventilated tunnel twenty cartridges may be detonated without as much inconvenience as is caused by the burning of one.

The whole trade in explosives will be placed on an entirely new footing after Jan. 1, when the Explosives Act, which was passed last session, comes into force, so that the question of introducing dynamite as a blasting material can now be very advantageously considered. Notices have recently been served by the Board of Trade on all harbour authorities, railway and canal companies that carry explosives, that they must prepare and publish bye-laws for the regulation of the loading, discharge, and transport of gunpowder, dynamite, and other explosives. That dynamite is a very efficient blasting agent is beyond question, and miners generally will do well to give it at least a fair trial.

STEEP GRADIENTS ON RAILWAYS.

An ingenious method for overcoming steep gradients on railways was described in a paper read before the British Association at Bristol by Mr. Henry Handyside, late Assistant Provincial Engineer to the Government of Nelson, New Zealand, the essential novelty being the utilisation of the locomotive used on the ordinary level portions of the line by employing it as a fixed engine at each incline for pulling up the train by rope traction. Mr. Handyside remarked that several of the means adopted for overcoming steep gradients on railways had been successful in a commercial point of view, but none of them had been of a sufficiently cheap and effective nature to recommend their adoption for general use on any line taken through a difficult and hilly country, and where the said steep gradients would be frequently recurring. Hitherto, as he very truly says, few lines have been a remunerative commercial success—that is, few lines have paid an adequate percentage on the money invested in their construction. The want of this great desideratum, as proved by most existing railways, is having its influence in keeping capital from being invested largely in all parts of the world, where the extension of the railway system would bring into occupation large tracts of available country, which from their very extent must necessarily be sparsely occupied at first, but from that very extent offering large inducements and advantages to the pioneer of civilisation. Another great mission for railways to perform is the cheap haulage of the mineral products of any country, and unless a system of railway construction very much cheaper than the present one is adopted many rich mineral deposits will remain unworked, or if worked will make the pecuniary results most unsatisfactory to those who have ventured their capital in the speculation.

Where there is sufficient inducement to establish railways of the present kind Mr. Handyside does not propose to interfere, but his system will prove especially valuable where from the distance or difficult nature of the intervening country a cheaper means of connection is alone admissible. Feeling convinced that the present rate of railway construction (principally entailed on it by the requirements of a high rate of speed even up the ruling gradients) was too costly for thinly populated countries where speed was not indispensable, Mr. Handyside turned his attention to study carefully the causes which lead to the present costly style of permanent way. The gradients in which the greatest amount of economy is required range from 1 in 15 to 1 in 10, and the remaining portions of the line are left comparatively level. With sufficient steam-power the tractive power of all locomotives depends entirely on the weight which can be thrown upon the driving-wheels, and, consequently, the greater the number of these wheels which are coupled together the greater will be the friction or resistance obtained from the several points of contact between the surface of the rails and the tires of the driving-wheels. With the ordinary locomotive system the engine requires to weigh one-half as much as the entire train to be drawn when the gradient is heavy. Thus the effective power is limited by the weight, and not by the steam-power. Steam-power can be augmented to a great extent, but under the ordinary requirements of locomotive traction this extra steam-power would necessitate a corresponding increase of weight to be thrown on the driving-wheels. Theoretically, there is no limit to thus increasing the hauling power of an engine, but practically he says the limit has already been almost past, as we find that there is a limit in the endurance of even the best steel rails to withstand compression.

According to Mr. Handyside's system the locomotive engine is coupled to the train by a steel chain or steel wire-rope, which is wound round a drum mounted horizontally in the framing of the engine, and rotated either direct or by gearing from a separate pair of cylinders. On each side of the engine-framing, and also on each side of one or more carriages or wagons of the train, there are suspended one or more self-acting gripping struts, which, when let down on the rails by the driver or other person in charge of the train, will firmly grip the sides of the rails, and hold the engine or train stationary. On arriving at the foot of a steep incline the engineer will release the hauling-drum, and may without stopping the engine run it up the gradient to any required distance. The driver having released the struts they come into contact with the rails, and on the engine being stopped and attempting the least retrograde motion they firmly grasp the rails, and maintain the engine in its place. The hauling-drum is now started, and the chain draws the train close up to the engine. The struts on the train are now allowed to come into action, and firmly hold the drum in its place, or these struts may have been released before commencing the ascent of the incline, by which means all possibility of accident from the breaking of the chain or other cause is entirely prevented. To prevent overwinding an automatic arrangement may be attached to the engine, by which the steam is cut off from the cylinders which drive the hauling-drum the moment the train touches the engine. These operations will be repeated as often as required until the whole of the gradient has been surmounted. Mr. Handyside states that the adoption of his method would not prevent the line at some future time from being brought up to the level when the requirements of trade shall warrant the additional expense. As an evidence of the economy of rope traction as compared with traction by locomotive on inclines, Mr. Handyside refers to the experience of the Edinburgh and Glasgow Railway, where the total cost of working an incline for one year was 734*l.* 18s. 4d. when the traffic was worked with a wire-rope by a stationary engine, and 3204*l.* 16s. 10d. when locomotives were

ed, giving a difference of 2460*l.* 18s. 9d. in favour of the wire-rope system, and he urges that if the result is so satisfactory with a single incline that upon a large number it must become a very important one.

REVIVAL OF PLUMBAGO MINING IN ENGLAND.

Most of our readers will have heard of the celebrated and ancient Borrowdale Plumbago Mines, and will be aware that it was to the fact of being formerly manufactured exclusively from the material derived from these mines, the finest and purest in the world, that was due the reputation of the famous Cumberland pencils. A number of years since the mines were closed, and it was supposed that this was merely in accordance with the usual custom, which was to close them when a sufficient quantity of plumbago had been extracted to supply the country for a certain period, and re-open them at the end of that time. As, however, when the supply was used up the working of the mines was not resumed, the impression got abroad that they were exhausted, and a letter appeared in the *Times* some years ago, which gave additional strength to this supposition. The supposed circumstance occasioned considerable regret, on account of the exceeding excellence of plumbago—Russia, Germany, and Canada being about the only other countries where it is found—and because pencil manufacturers were driven to the alternative of importing at great expense from those parts of the world a material usually inferior quality, which, unlike the Borrowdale deposit, requires to undergo a process of refining to prepare it for use. We have now the pleasure of announcing to our readers the fact that the mines, which have remained closed for so long a period merely in consequence of private legal difficulties preventing their being worked, so far from having been exhausted are being re-worked, with results which promise the renewal of plumbago mining in this country on a more extensive scale than it has ever hitherto been conducted. About two years ago the mines were leased from the owners by Mr. William Salmon, F.G.S., Plan How, Penrith; Mr. A. B. Salmon, solicitor, Ulverston; Mr. James Barratt, Borwick Lodge, Ambleside; and Mr. J. S. Sawrey, of Ulverston—and since that time vigorous operations have been going on with a view to their development. Within the last few days a quantity of plumbago has been discovered equal in extent and value to the finds by which such immense sums of money were realised during the working of the mines many years ago. and operations are now proceeding actively for the extraction of the material, tons of which are being prepared for the market. The plumbago is being discovered in masses of huge dimensions, one of which we have seen, which is of the uncommon weight of 40 lbs. The manager of the mines, Mr. Dixon, who has been connected with them since he was a boy, and who was preceded in the management by his father and grandfather, declares that he never in his experience saw or heard of such a promising find as has now been brought to light. The mines are situated in the romantic valley of Leathwaite. The locality has been celebrated in poetry by the immortal Wordsworth, and is well known to many of our distinguished artists, who have painted some of the most enchanting views, rendered more striking by the magnificent yew trees by which the neighbourhood is famed, one of them being the largest in England, and having a circumference of 21 feet. On the royalty there is also a stone, which said to be nearly, if not quite, equal in size to the celebrated Cowder stone.

A few further facts relating to the mine may not be here out of place. The manor of Borrowdale was owned by the Abbot of Furness up to the dissolution of the monasteries by Henry VIII., when it became the property of the Crown, and remained so until James I. sold it to William Whitmore and James Verston, citizens of London. Sir Wilfred Lawson, Knight of Isel, and several others purchased the manor two years later—in 1615. It is described in a document commonly known as the Great Deed of Borrowdale, conveying all royalties with the exception of black lead. There are two traditions existing—one to the effect that the mine was disclosed by the uprooting of an old ash tree by a violent breeze; the other, more romantic in its nature, alleging that two young lovers were sitting amongst the branches of an old ash tree, which, being unequal to their weight, broke, and at the roots upheaved the plumbago, and from that time the mineral was searched for at this spot. Camden, the historian, devotes a little space to describing it, saying—"In this parish of Seatoller Fell is the famous mine of black lead, or wadd, a mineral very scarce elsewhere to be met with. It is a mineral earth, or shining stone, which painters use in drawing their lines and shading the pieces in black and white." Robinson, in his history of Westmoreland and Cumberland, speaking of this mineral, says "The ore is more valuable than copper, lead, or iron." The mine itself has been worked for centuries, from as early as 1644 by Sir John Banks, and the mine has ever since remained in the possession of his descendants. A great deal of money has from time to time been expended in driving levels into the hill containing the mineral, and yet from none of these have any cross-cuts been made of any importance where the plumbago occurs.

The mine is worked by eight stages, 30 veins, eight pipes, and four great sops, inches, or cells of the wadd, or plumbago, as it is usually called. The produce of the mine was so valuable as to necessitate special legislation as to ensure its protection; indeed, some of the miners themselves were so unprincipled as to engage regularly for years endeavouring in making a subterranean passage by which they might secretly dispoil the mine, and enrich themselves. In the 25th year of the reign of George II. (1752) an Act became law by which any persons found stealing wad should be committed to prison for one year, and be publicly whipped by the common hangman; or, at the discretion of the judge, be transported for seven years, and if they returned before the expiration of that time they should be put to death." This Act was not repealed until the reign of George III., when the Legislature, probably, were of opinion that the mines had become exhausted, and, consequently, that it would be a cruel thing to punish anyone who might casually pick up a piece of mineral from amongst the debris. In order to show the value of the mine, we may mention that in 1778 no less than 417 casks, containing 70 lbs. each of the best quality black lead were obtained from it, which, calculated at 30s. per lb., would amount to 43,785*l.* Besides this yield of the finest quality quantities of the coarser mineral was found. There were no other openings of the pipe in 30 years, up to 1788. In 1812, at Winkle's pipe, at the meeting of the veins, a piece of wadd was discovered that gave a yield of 87 casks of best quality black lead suitable for pencils, and 495 casks of the coarser mineral, in all 582 casks. The casks realised 24,360*l.* The pipe was worked to a depth of 84 yards. Notwithstanding the stringent Act of Parliament previously quoted, lead found its way to Keswick. Jews attended the George Hotel, Keswick, regularly to buy the black lead. The mining owners, to protect themselves, sent all their black lead to the warehouse in London, where it was sold monthly. Thus, any offered for sale in the country must have been procured dishonestly, except it were scattered pieces, which not unfrequently were found in the best of streams after floods had washed them down. In August, 1800, a house was built over the entrance of the mine, and armed men guarded it by night, the fire-arms used being now preserved at the mine. The miners on quitting the shaft were carefully searched for fear that they might have pieces of wadd hidden about their persons. The casks containing the mineral were placed on pack horses, and escorted by men armed with blunderbusses all the way to Kendal. Here the casks were placed in wagons, and dispatched to London without escort, it being presumed the value of the contents would be unknown, and the wagons were left to take their chance of being conveyed to London without molestation. The mines were worked very successfully from 1800 to 1803, and they were then closed until 1809. Work continued during that and the following year, but only a small quantity of the mineral was found. In 1803, 3795*l.* was invested in the working of the mine, and the net profit realised was 92,690*l.* In 1804 no less than 19,924*l.* was invested in the working of the mine, and the net profit reached 118,875*l.* The mineral was sold generally at 3*s.* per lb.

The plumbago has been found embedded in a stratum of rock, of a formation which is known to exist nowhere else in the United Kingdom. The presumption is, therefore, that Borrowdale is the only part of Great Britain where similar material exists. The lessees of the mine contemplate, we understand, the erection of large pencil-works, so that we may again anticipate coming into general use those pencils for the superior quality of which Cumberland has been so renowned. We congratulate the enterprising gentlemen who have thus not merely commenced an undertaking which is likely to prove most remunerative to themselves, but have also revived what was supposed to be an extinct British industry.

NOVEL SYSTEM OF WORKING STEEP GRADIENTS BY LOCOMOTIVES.—A novel system of working trains on steep railway gradients by locomotive engine, patented by Mr. Graham Stevenson, of the firm of Dick and Stevenson, Airdrie, and Mr. John Reid, manager of the Provanhall Collieries, near Glasgow, has just been erected at the collieries named, and put into operation during the past week. The incline selected for the first application of this system leads downwards from the main rails of the Bailliston branch of the Caledonian Railway to two pits belonging to these collieries, about ¾ mile distant, with an average gradient of about 1 in 13, and ranging between 1 in 11 and 1 in 15. About six years ago Mr. Stevenson's firm constructed two powerful tank locomotive engines to work this incline and marshal the trucks of coal before entering the main line; and during that time the engines have performed the work with remarkable success, considering the extraordinary gradients over which they had to travel—the steepest, perhaps, with one exception, worked by locomotive power in the kingdom. The traffic from the pits has so increased of late as to make it impossible for the engines to overtake it, and the construction of a third engine, or some other means of assisting the two, came to be a matter for consideration. With the latter view it was proposed to erect a small stationary engine, working a wire-rope, to contribute to the power of the locomotives, or occasionally to draw a few trucks independently of them; but in place of a stationary engine, the idea of stationary gearing which might be acted on by one of the locomotive engines, occurred to the patentees, and this idea was realised, as we have stated, and has been put into practical operation within the last fortnight. Since that time the machinery has been inspected at work by a large number of engineers and colliery proprietors, many of whom have expressed decidedly favourable opinions regarding it. The efficiency of the system, together with the simplicity of the arrangement, will probably invite for the system a large adoption where the nature of the ground involves inclines of exceptional steepness, and at other parts admits of the use of locomotives. In such instances stationary engines will be entirely avoided, and no additional working expenses incurred more than if the whole line were worked straight through by locomotives. The mode of working is illustrated by diagrams in the engineer, and may be described as follows:—A set of wheels, corresponding to the wheels of a locomotive, are mounted in stationary framing placed in a stone-cased excavation below the line of rails on which the trains are worked; these wheels are in connection with them spur gear and winding drum of the usual kind. The rails project away at the parts where the tops of the wheels are, and when the locomotive is run into position up against a buffer bar, and secured there by a screw, its driving wheels rest on the four wheels below, the entire weight of the locomotive serving to impart driving power by adhesion. Then, on the locomotive being made to drive its own wheels, these, acting frictionally on the wheels below, drive the winding gearing. The rails form part of a siding, whilst the winding drum is at the rise of the incline. When the train is brought to the top the locomotive is released from its anchorage, runs out, and engages the train on the level, disposing of it as desired. In lowering the empty trucks down the incline the pinion is disengaged, and the drum controlled by the friction strap and lever. The amount of work capable of being performed with the new arrangement is four times greater than before, when the delays consequent on running the locomotives up and down the incline, shunting, coupling, sanding, &c., are taken into account, the cost of labour remaining the same, whilst the wear and tear of the rails and engines is greatly diminished.—*The Engineer*.

MINING NEWS OF THE WEEK.

Messrs. F. W. MANSELL and Co. (Sworn Stock and Share Brokers), Pinner's Hall, Old Broad-street, write to us as follows:—

HYDRAULIC GOLD MINES.—In our last communication, tracing the origin and progress of this description of mining, we reached the spring of 1852, when a miner, whose name is not remembered, put up a novel machine on his mining claim, in Placer County, California. This machine was very simple—from a small ditch on the hill-side a flume was built towards the ravine, where the mine was opened; the flume gained height above the ground as the ravine was approached, until finally a "head," or vertical height of 40 ft., was reached. At this point the water was charged into a barrel, from the bottom of which depended a hose about 6 in. in diameter, made of common cow-hide, and ending in a tin tube about 4 ft. long, the latter tapering down to a final opening, or nozzle, of 1 in. This was the first hydraulic apparatus in California. Simple in design, dwarfish in size, yet destined to grow out of its insignificance into a giant powerful enough to remove mountains from their foundations. The news spread among the miners, the wonderful practicability of the new invention was at once acknowledged, and wherever circumstances permitted a hydraulic, the name adopted for the novel apparatus, was "rigged." At this stage we must leave the subject till the next opportunity.

BLUE TENT CONSOLIDATED.—It has been proved by the most ample testimony that the ancient gold-bearing gravel of California contains an inexhaustible store of gold diffused with wonderful uniformity throughout the mass, and in the aggregate far exceeding the entire product which the Golden State has yet sent into the commerce of the world. In certain favoured localities this gold-bearing mass is within the control of water brought from the mountains, which is the power and only means requisite to extract gold from its resting place. The Blue Tent property is admitted on all hands to embrace one of the most defined, extensive, and valuable areas of auriferous gravel. Now that the stupendous work of constructing a canal for a length of 27 miles has been successfully completed, ensuring a large additional and permanent supply of water, it may not be inopportune to mention that the fall from the summit of the hill to the bed of the river is 1400 ft., while the outline of the rim rock is such that it is possible to wash off the greater mass of the superincumbent gravel through the natural channels already made to hand by Nature, without the labour and cost, both of money and time, so often required to obtain such facilities, even in an imperfect degree. The wealth of this deposit is laid open along its entire width for more than a mile upon the river into which the hydraulic washings are discharged. The great importance of this natural order of things will be readily appreciated by all who have taken pains to informs themselves of the facts set forth in regard to the mode of working properties of this description. By it the fortunate owners of Blue Tent can work as many hydraulics against the gold-bearing gravel as water can be found to supply, without fear of inconvenience from the accumulations of tailings, and without the preparation of costly bed-rock tunnels. The abyss of the steep canyon affords also the most perfect possible condition for the advantageous disposition of sluices and under-currents, in and by which the auriferous gravel and cements are compelled to yield up to the quick-silver the gold they contain. As this property is now about entering upon its successful career it may not be out of place to put forward the opinion entertained by Mr. McLean, the able superintendent of the Sweetland Creek Hydraulic Mine, as follows:—

In the 400 acres of gravel embraced in the Blue Tent grant, 225 ft. deep, there are 145,200,000 cubic yards which, including all the richer under strata, estimated at only 15 cents per cubic yard, the average obtained from the 5,158,150 cubic yards exhausted, give $21,780,000 gross as the returnable contents of the property. Suppose three monitors under a pressure of 300 ft. to discharge each 1000 inches of water, and to wash jointly 9000 cubic yards per day of 24 hours, and to operate continuously for 10 months, over 53 years would be required to exhaust the property, whereas if the additional depth of the placer was estimated at 10 cents per cubic yard, the amount returnable would be over $33,000,000, and 94 years or more would be required for the displacement. The expense usually attending hydraulic operations is from one-fourth to one-third of the gross returns the water belonging to the mine.

Since the above was in type advices have been cabled stating that "Blue Tent ditch absolutely completed; last run of 90 hours on South Yuba claim yielded nearly $6000." The returns for the year, so far as made up, show that the gravel at South Yuba claim has realised $1·6 per inch of water used, the workings here having just entered the rich blue lead. At Enterprise the blue lead is not yet reached, but nevertheless the gravel has given 30 cents of gold per inch of water used. The Smartsville gravel, hitherto reckoned as the richest in California gives 84 cents per inch of water, whereas so far the South Yuba claim, belonging to the Blue Tent Company, has yielded $1·6. This is a significant feature, the importance of which it is not easy to over estimate.

RICHMOND CONSOLIDATED.—Knowing that the base of the Ruby Hill, whereon the Richmond is situated, consists of a series of quartzite strata, conformably upon which lies a thick group of limestone beds, the changes that are now being reported from week to week are easily understood, and their importance appreciated. The ore bodies occupying the shattered shaley limestone, bounded by the quartzite below, and the more massive limestone above, the walls of the bed vein are necessarily extremely irregular, causing remarkable changes in its dip and thickness. Above the 200 feet level the distance between the foot and hanging walls is 256 ft. by 150 ft. in length. Between the 200 and 400 ft. level, as shown in the rise from the 400 ft. level, the ore body is reduced to 60 ft. in length by 40 ft. in height, varying from 2 to 6 ft. in width, while in the 600 ft. level (where the ore body has been opened out) its greatest length is not more than 40 ft. As pointed out by the manager, this shortening may be temporary, but it diminishes the "reserves" (or what there was reason to expect) considerably. Our more immediate purpose, however, upon this occasion is to point out the extremely irregular size of the vein. The opinion is entertained that ore bodies found under similar conditions to these are most productive, and yield the highest grade ore when the containing rock is the massive limestone, the value changing as the surrounding rock alters in character. Without in any way endorsing this opinion, the development of the Richmond Mine so far would certainly seem to support it. It is quite true unexpected boulders of limestone have been found in the stopes at the bottom of the 500 ft. level (where until recently there was more low-grade ore than had been calculated upon), and that limestone was struck in the winze 13 ft. below the 600 ft. level, but the most recent advices state that at these points the limestone has been passed through and ore reached. Inasmuch as all sorts of rumours are in circulation, originated no doubt by the above circumstances, we most strongly support the suggestion that the "reserves," both as to amount and value, should be re-estimated, because it must be borne in mind that Prof. Price, in his recent report, computed the reserve ore in the upper part of the mine at the same value as in the deeper workings, placing the "reserves," as a whole, at a much higher standard than subsequent results have realised, besides which the manager has informed us that "since the stope in the back of the 500 has failed, the ore from the upper part of the mine not being so high grade, it has affected the returns seriously." This suggestion is not our own; it has been made by many shareholders with whom we are in correspondence. It is put forth to arrest the apparent declining confidence in the successful future of the mine. As one of its earliest public supporters we would respectfully submit that this question should be deliberately considered by the executive as a step likely more than any other to re-establish the confidence of the shareholders in the investing value of their property.

PATELEY BRIDGE LEAD MINES AND SMELTING COMPANY.—If one may judge from the numerous enquiries that continue to be made concerning this property, it would appear that its extent, value, and profit yielding capabilities are as yet most imperfectly understood. The mines embrace an area of about 1000 acres, containing 26 well-defined lodes, the whole of which have been more or less productive. This fact is of primary importance, as probably beneficially affecting the immediate future, as from a close inspection of the old workings there can be no doubt that the veins in the upper sections have been imperfectly wrought, or only very partially worked, between the surface and the day levels. This has been already shown by the important developments which have been made near the surface. The nine miles of horse levels driven in some of the lodes and in cross-cuts prove the extent of past underground operations at the adit level, and also show the impossibility of attempting to estimate or even work the mines in their entirety at once, but the portions now in hand will, no doubt, return sufficient profit to satisfy any shareholder, however sanguine his anticipations may be. Referring to the surface workings alone, a well-known authority who has been practically familiar with these and the other mines in this district for many years, says—"That any judicious and extensive series of operations for practically raising the ores which have been passed over, or neglected, a highly remunerative source of profit must certainly accrue therefrom." Of the 26 veins, the data obtained from old plans and accounts now extant, coupled with the result of modern workings, establish the following facts:—That the Jarnot vein was rich to the lowest point reached, that the Rake vein has always been and is still rich (as seen in the present workings), that the Sun vein is very rich, that the Masden and South veins are very good, that the Lord Howe vein is very rich, that the Virgin, Old Mixture, and Lord Nelson veins are moderately good, that the Pomgass vein is good, and that the Cleaver, Galloways, and Water-hole veins are very rich. The Water-hole, Sun, Jarnot, and Rake may been be considered the master veins.

The last named is still whole to a considerable extent above the level of the deeper workings. It is powerful and extremely productive, the gossan being principally carbonate of lime, coupled with carbonates and sulphurets of barytes. It is very easy to work, the pick alone being almost sufficient with which to drive the levels. When intersected by other veins it yields and makes ore in large bulk, and as southward from the engine-shaft a series of intersections occur, the great importance will be seen of continuing the day level as well as the 20 fm. levels. Already valuable discoveries have been made in this direction, and every deposit intersected gives 50 fms. of backs from the surface. The Sun and Jarnot veins in the eastern mines have proved extraordinarily rich throughout, and all that is required is to attain depth. A deep level has recently tapped the water in these veins, and they can now be worked perfectly dry for about 30 to 40 fms. deeper. In so extensive a group of mines as these (says a correspondent) it is impossible to estimate what returns can ultimately be made, as every portion of the ground has been rich to a greater or less degree, and although continuous operations have been carried on for over 500 years, yet the mines are still in their infancy, as, with the exception of a very fractional portion, the veins have been untouched below the adit level, and the yield from the veins has steadily and uniformly improved in depth. A considerable amount of business has taken place in the shares during the week at full quotations, but the price is still very far below what the shares should command as a progressive investment, altogether irrespective of the advancing speculative value which necessarily attaches to such a property.

EXCHEQUER GOLD AND SILVER COMPANY.—This property, held almost entirely among influential private capitalists, after a somewhat protracted period of irregular progress, and not without hindrances and disappointments, seems at length destined to occupy a foremost position. A discovery of considerable magnitude is reported to have been made, the ore yielding such an enormously high percentage both of gold and silver as to entirely eclipse anything ever previously found on the Pacific Coast.

GREAT WHEAL VOR.—The recent discovery in this mine is maintaining its full value. The lode in West Wheal Metal shaft is opening up very satisfactorily; it is now reported to be 3 ft. wide, exceeding in value 50*l.* per fathom. The other points of operation at the 40 and 70 are also producing valuable work. Altogether the prospects are very cheering, and the returns will soon be considerably increased. We can recollect the time some years since when a much less important discovery made, under less favourable circumstances, was the augury of one of the greatest successes known to Cornwall. We are old enough to remember Great Wheal Vor shares advancing from 5*s.* to 42*l.* per share. History repeats itself.

GREAT LAXEY MINING COMPANY.

The annual general meeting of shareholders (reported in the Supplement to last week's Journal) may probably be regarded as the most encouraging, and at the same time the most important event that has taken place in the history of this successful company—encouraging as indicating the established prosperity of the property, and important in so far that it has cemented interests the severance of which so long tended to mar the otherwise remunerative progress of this grand old mine.

Mining under the most desirable circumstances has always perplexities and annoyances sufficiently taxing to those entrusted with the management, and when an executive have also to combat with unparalleled labour difficulties and other abnormal conditions, the exercise of administrative astuteness becomes at once urgent to avert eventualities possibly seriously endangering the future.

The Great Laxey Company has from its earliest stages been especially favoured by having at its head a Chairman animated by a desire to meet all legitimate requirements, and ameliorate the position of those employed, but equally steadfast—even to a fault—in repelling any step bearing the semblance of an attempt to unjustly prejudice the interests of those of he which is the custodian. During such exceptional emergencies difference of opinion naturally enough arose as to the views adopted, whether to compromise or steadily resist the demands of the miners. The question may have been, perhaps, somewhat violently agitated, but all now agree that everything done had been for the best, but it must be admitted that to the bold policy of the Chairman may in no small degree be traced the amity now existing between employer and employed, justifying the official statement "that the whole of the employed under the guidance of the managers pursue a steady course of action to the very great advantage of the company." While the Chairman has been at all times most willing to accord approbation wherever due, it is equally true that the untiring exertions which he brought to bear throughout almost overwhelming difficulties, have materially contributed to the satisfactory position the company at present occupies. As Mr. Peter Watson very aptly remarked at the meeting—after Mr. Dumbell had been a shareholder for 43 years, and Chairman for 40 years, having given dividends all that time to the shareholders, it must be most gratifying to him to hold his present position after all that had been said and done, and (added Mr. Watson) he hoped all that had occurred in the past would be buried in oblivion, and that in future they would work together for the benefit of all concerned.

The shareholders as well as the directors and managers are alike to be congratulated. During the past six months there were sold 1200 tons of lead, realising 28,600*l.*, and 8700 tons of blende, realising 26,527*l.*, making the handsome total in one half-year of 55,000*l.*, leaving an actual net profit of 26,000*l.* This has enabled the directors to declare dividends equal to 50 per cent. per annum upon the capital, and set aside 4000*l.* towards the foundation of a reserve fund. There cannot be a divided opinion as to the great propriety of settling, as far as practicable, the amount of the dividends at a fixed sum, and the prudence of accumulating a reserve fund until it shall have reached at least 20,000*l.* must likewise commend itself to every *bona fide* holder in the property, who has a greater interest in its permanent welfare than in any spasmodic inflation in the market quotation of its shares. By the proposed investment in Consols of the amounts set apart from time to time as a reserve it will really be that which it reports to be—a reserve fund, placed beyond the possibility of a doubt. Should any great expenditure have to be incurred it will not be a deduction of the current profits, and the consequent diminution of dividend; and in case of an insufficiency of profits, the amount necessary to make up the usual quarterly dividend can be appropriated from the reserve fund, pursuant to the Deed of Settlement.

One of the most pleasing features of the meeting was the graceful manner in which the Chairman, proposing the re-election of the English directors, alluded to Mr. Peter Watson. It was a pleasure to the Chairman to find that Mr. Watson was again able to give attention to the business of the mine, feeling convinced that he will

give the company the full benefit of his practical experience. The Chairman added that Mr. Watson's knowledge of mining was very considerable, and it was really a great comfort to the Chairman to be able to write to a person like Mr. Watson, asking him for his opinion.

After 70 or 80 years of successful development, during which the shareholders in the present company have alone already received in dividends no less than 18*l.* 13s. per 4*l.* share, and the property now commanding a market value of 300 per cent. premium, the mine appears yet to be in comparative infancy, as far as the extent of the explorations are concerned, and possibly it is not too much to say that at no former period have there been more solid grounds for congratulation, not only upon the fruits of the prosperity in which the shareholders are now actually participating, but upon the future prospects of the Great Laxey Company.

Meetings of Public Companies.

WEST SETON MINING COMPANY.

A meeting of adventurers was held at the Mine on Thursday, and in view of a more than ordinarily satisfactory report from the mining agent, there was a large attendance of shareholders. There was just a fear that the proceedings would not be altogether unanimous, because it was said that a few of the local shareholders were not entirely enamoured of the course which the purser took in issuing the circular which he did relative to the disposal of the 109 relinquished shares; but the meeting was a most harmonious one from opening to close, and although Mr. Pryor's views upon the subject were not adopted, that gentleman had the satisfaction of hearing his motives eulogised in the highest terms, and of being personally thanked for the admirable printed statement of accounts which he issued to the shareholders prior to the meeting.

The chair was occupied by Mr. PRYOR, who read the statement of accounts, from which it appeared that there was at present a balance against the mine of 789*l.*; but against this has to be put the sum of 2500*l.* which Mr. Basset has given towards the new engine, and which will reduce the deficit by that amount. Every item in the accounts is charged up as closely as possible—the labour costs to Sept. 11, and the merchants' bills to the end of July. The printed accounts include 95*l.* 18s. arrears of call, but 60*l.* of this has since been paid, and the remainder will be forthcoming in a day or two.

The agents in their report stated that the winze below the bottoms under the 140, west of Michell's shaft, was sunk 8½ fms., and was worth for 9 ft. long 20*l.* per fathom for tin. The 140, west of Michell's, has very much improved, and will now produce 10 tons of copper ore per fathom, and the agents value it at fully 80*l.* per fathom. On Wednesday they sampled 455 tons of copper of good quality, which will be sold in a fortnight. The new engine and pitwork on Michell's shaft are working very satisfactorily. The cost of these new erections has been about 6000*l.*, which was just about the amount originally contemplated. There is now, without doubt, sufficient pumping power to contend with the water another winter, and the prospects of the mine, especially in the western part, have very much improved since the last account.

Capt. THOMAS added that the parcels of ore awaiting sale were worth at least 2600*l.* The report and accounts having been adopted, the question of a call came under consideration, and with regard to this,

Mr. P. P. SMITH said: It was but a few short months ago that dark and gathering clouds hung over and around us, and the mournful cry went out that the district was in danger. That cry brought sadness to many a home in this neighbourhood; the mines all around us succumbed; Wheal Seton although in powerful hands, East Seton, North Crofty, North Roskear, and Henrietta, all surrendered. But just at the moment when everything was looking gloomy a silver lining was at least seen in the cloud which hung over us, and in a very short time it widened, until at length we felt there was some chance of our being preserved. The manner in which we were saved was due to the liberality of our landlord, Mr. Basset, and to the pluck of three-fourths of the adventurers in this mine. (Applause). Mr. Basset told us that if we would erect an engine powerful enough to drain the mine he would not only annex New Seton to our undertaking, but would bear half the estimated cost of the new engine, which was then deemed to be about 5000*l.*. (Hear, hear). One-fourth of the shareholders had surrendered their shares, either because they were unwilling or unable to encounter the difficulties that existed, and, therefore, we who remained had the greater difficulty to contend with. But we determined to proceed. Our excellent friend, Mr. Loam, rapidly erected the engine, the levels were re-opened and quickly driven; and now I have the pleasure of congratulating you upon the fact that there is at this moment upon your floors 455 tons of rich ore, worth, as you have just heard, 2600*l.* (Applause). Besides this, you have the other encouraging features contained in the agents' report, and these are important considerations for us in approaching the question as to how we shall deal with the deficiency which is thrown upon our books. I think there is a mode of dealing with that deficiency without selling our 109 shares to the public. My own strong conviction is that every endeavour ought to be made to preserve those shares, or at least the greater number of them, for those who have borne the burden of the day and have brought this mine from a gloomy state into one of most cheering prospect. (Hear, hear.) I take it, according to the purser's statement, that we owe to relinquishing shareholders the sum of 2000*l.*, but that sum will not be payable until April next. There is 7000*l.* owing besides, and I think we may fairly calculate on 2500*l.* for the ores awaiting sale. Then we have 2500*l.* promised by Mr. Basset, and I think that if instead of selling the 109 shares we sold only the odd nine, and realised upon them at least 1000*l.*, and made a call to-day of 5*l.* only, which would give us 1500*l.*, we should then be in a position to go on, at all events until the next meeting, when, if the mine should develope itself as it is now doing, there is even a reasonable probability that no further call will be required, or if so that a call of 5*l.* at the most would be enough to meet the deficiency. If you adopt this plan it seems to me that by an easy mode you increase your interest by one-fourth. I cannot consider that the public are entitled to the preference if we ourselves are willing and able to pay the amount which stands upon our books, and I believe that if we adopt this simple plan we shall before long pay off the amount that is now standing, and that we shall yet rank amongst the greatest copper mines in the county. (Applause.) I have seen it stated that the purser ought hardly to have bared the state of the accounts to the shareholders as he did, but my opinion is that he is entitled to the highest possible credit for having given us so full and so clear a statement—(hear, hear, and applause)—for without it it would have been impossible for us to come to a proper decision to-day. Mr. Pryor accompanied it, as I think, with the very proper suggestion, emanating from the manager and himself, that if we were to offer the 109 shares for sale we should at once be out of debt. But that circular was issued some ten days or a fortnight since; and during that time the mine has very greatly improved, and although it was said that throwing such a large number of shares upon the market would depress their price, I see by the paper that they have gone up from 60*l.* or 70*l.*, to 95*l.* or 100*l.* This shows that the public consider we have a great property here, and if this is so let us keep it as long as we like, and sell, individually, when we please. In concluding his remarks, Mr. Smith said he believed it would be a great advantage to the company that the shares should be sub-divided by four, and he moved that nine of the relinquished shares offered for sale by public auction, at such a time and price as the manager, the purser, and Mr. Rule may deem expedient; that the remaining 100 shares be thrown over the boat-book, and be deemed the property of the shareholders in proportion to their respective interests in the company, thus reducing the present number to 300; that the offer of Mr. Basset to annex New Seton to West Seton be accepted, and that Mr. Basset be asked to consent to the shares in West Seton being sub-divided into 1200.

Mr. W. H. RULE, in seconding the resolution, said he could not refrain from saying he considered there was some credit due to a few of the Camborne shareholders, who, when matters seemed to be at their worst, consulted frequently and anxiously together in order to see what could be done to prevent the dissolution of the mine, and whether some plan could not be devised for that purpose. On one occasion he called upon some of his friends, and pointed out to them that if the mine was drowned it would cost 9000*l.*; and he suggested that they should wait upon Mr. Basset, lay the state of affairs before him, and ask if he would assist them in putting up an engine. But there was only one gentleman—Captain Stephen Williams—who volunteered to go with him. They waited upon Mr. Basset, made known to him the facts of the case, explained to him that there were about 200 persons employed underground, that the mine had paid something like 40,000*l.* in dues to the Tehidy estates, and that if the water once came in the chances were that it would never be forked again. Mr. Basset met them in the most generous spirit, and at once put himself into personal communication with Mr. Cartwright, and at a subsequent interview the most earnest desire was evinced by Mr. Basset to assist them in every possible way. In addition to this, Mr. Pendarves gave his permission to put up dams in his right, and he had no hesitation in saying that those dams were the salvation of the mine. One important and serious difficulty which stood in their way at that time was the relinquishment of such a large number of shares, which, of course, threw an increased responsibility upon those who continued their holding. Parties were pressing shares upon the market, but no person would buy them, and he believed that he bought almost every share that was offered for sale from that time up to within about four months ago. He bought some of them as low as 5*l.*, and the highest price he gave was 25*l.*, but he could not go on purchasing shares in that way, notwithstanding his great anxiety that the mine should be kept going, and he, therefore, went to other gentlemen, and begged them to join him in buying them. But he received the same answer all round. Gentlemen shook their heads despondingly, and said, "No, Rule, my boy. It can't be done for the money. (Laughter.) I don't like the calls; they are far too heavy." This certainly was not very encouraging, but he had faith in the mine, and he went on buying till he had increased his interest from 8 shares up to 67. (Applause.) He was quite sure that if the shares had not been bought up in this way the outside adventurers would have become frightened at the state of affairs, and if they could not have sold their shares they would have relinquished them. But he was proud to see that the mine was now in such an excellent position—(hear, hear)—and he was satisfied that from this time it would make large profits. Indeed, they were now in a position to make a quarterly profit of at least 1500*l.*——Capt. THOMAS: Gently, please.——Mr. RULE said he knew he was right, and experience would prove it.——The resolution was carried, and it was further resolved that a 5*l.* call should be made.

Capt. THOMAS, in answer to a question from Mr. Williams, said he thought it would be to the interest of the adventurers that another agent should now be appointed. The men employed on the mine were increasing, and so were the returns, and for some little time past they had been obliged to employ a watcher at 3*l.* 10s. a month. If another agent were appointed the services of the watcher could be dispensed with.

Capt. S. TYRREL was unanimously appointed as the additional agent at a salary of 8 guineas a month.

Mr. RULE then said he had a strong opinion that they ought to tender for the supplies to the mine, but he did not wish to set himself up in opposition to Capt. Thomas, and he should, therefore, like to know what his views were upon the subject?——Capt. THOMAS replied that he was quite willing to tender for the supplies if the adventurers wished him to do so, but his experience was that tendering was a delusion and a snare. He tried it before, and was not at all satisfied with the result, because goods supplied at cheaper rates were almost sure to be inferior in quality.

Mr. BREWER advocated the system of tendering, and argued, in answer to Capt. Thomas's objection, that if the goods were not supplied according to sample they should be returned.——Capt. THOMAS did not believe that a single penny would be saved by tendering, and Mr. P. P. SMITH did not think it would be wise to adopt a plan which their manager so emphatically pronounced to be a delusion and a snare.——Mr. RULE said he would not press the point any further; and, after the transaction of some formal business, the proceedings terminated.—*Western Daily Mercury.*

EAST NANT-Y-MWYN LEAD MINING COMPANY (Limited).—At an extraordinary general meeting of shareholders, held Tuesday, Oct. 12, at which 38 members were represented, it was unanimously resolved to rescind the special resolution passed on Sept. 17 for the voluntary winding-up of the company, and to proceed with operations at the mine, at the earnest recommendation of the manager, Capt. Northey, funds being specially provided for carrying on the works for a limited time.

[For remainder of Meetings see to-day's Supplement.]

Original Correspondence.

LEAD MINING IN THE HALKIN MOUNTAINS.

SIR,—Having inserted my letter in last week's Journal, signed "Pedestrian," I shall feel obliged by being allowed to further encroach on your space in reference to this subject. The letter last week referred to mining in the Halkin Mountains, and as I had in my visit there more particular attention drawn to the Great Pant-y-Pydew Mine than others I mentioned it in particular. I have since writing that letter found that the prospects of this mine are even better than I then anticipated, and from reports in the Journal of last week, in conjunction with other reports as to the sales of ore, I believe my opinion on this property is perfectly correct, and that for a very long time the fortunate shareholders may anticipate large profits. Other hands than mine are writing on this district in which this mine is situated, and it only remains to the capitalist to judge of the merits of all or any of these. That minerals are needed is a fact, and the particular one (lead) exists here in abundance is also a fact; to raise this ore requires a small amount of capital, and there cannot be a doubt it will be most remuneratively employed.

Circumstances which have lately occurred will no doubt for the future render investments at a distance, and especially out of the United Kingdom, less sought for, and in proportion as this is the case capital must flow into those at home. The time has arrived when investors may make pretty sure of having their capital properly applied, and the institution of ornamental directors who have been qualified by promoters is now a thing of the past, and there is a hope that genuine undertakings will speedily receive that support they deserve. Wandering as I am in my letter, and travelling as I do in different parts of the kingdom, I wish to speak of my rambles into Cornwall and Devon, and had it not been for the lateness of the hour at which I write, and encroaching too much on your space, I would have mentioned to-day what I hope to do in next week's Journal.—*Oct.* 21. PEDESTRIAN.

[For remainder of Original Correspondence see this day's Supplement.]

THE BLACK ROCK COLLIERY COMPANY, LIMITED.

As promised in last week's Journal, we now publish Mr. Thompson's report upon this company's property. If what is stated is perfectly correct, and of this we can have no doubt, the company must prove highly successful. The simple fact of the coal belonging to the Llantwit series is sufficient to stamp the property a valuable one, as there is always a large demand for the coal from these seams, and there now remains but a small quantity left in South Wales. We understand, however, that in addition to the 500 odd acres leased by the company there remains still from 500 to 1000 acres, which can be leased at any time, as from its peculiar position it can, it is believed, only be worked profitably from the Black Rock Colliery Works. As stated in our last, the capital is 25,000*l.*, in 2*l.* 10s. shares.

The Black Rock Colliery is situate about 13 miles from the shipping port of Cardiff, on the Taff Vale Railway, and on the west bank of the River Taff, which with the railway forms its eastern boundary. It consists in all of about 523 acres of coal land lying between two large faults, which run nearly parallel with each other, and may be said to form the boundaries on the north and south sides of the estate. These faults run about N.N.W. and S.S.E., and both throw the coal down to the west, the eastern fault 120 yards, and the western 35 yards. Besides these there are no slips or faults of any consequence, and the estate may be said to be remarkably free from such disturbances. The only seams at present leased are identical with the celebrated No. 3 Llantwit, the coal from which has stood first on the Admiralty list for the past 30 years, and will generally fetch from 1s. to 2s. per ton more than any other of the South Wales coals. In this district the Llantwit splits, and forms two seams, which are about 50 yards apart.

The top or, as it is called at this colliery, the No. 1 seam is about 4 ft. to 4 ft. 3 in. thick, consisting of about 3 ft. of coal, with two partings of clod, one of 2 in. and the other 1 ft. 6 in. thick. The coal is of a bright hard bituminous character, and as the holing or getting is done entirely in the clod the coal turns out nearly all large, making only about 5 per cent. of small or slack. The present price of this coal is 12s. to 12s. 6d. at Cardiff, and the small or slack brings about 6s. to 7s. The quantity of slack, however, being small, the average price obtained is very nearly the top rate, and much higher that at most collieries. A large amount of coal is taken in the neighbourhood, and brings 15s. per ton. The present average cost is about 8s. 6d. per ton, but the staff at surface being quite sufficient for a larger property, any increase in the output would have the effect of reducing the average cost. When the colliery becomes properly opened out the cost of raising the coal from this seam should not exceed 6s. 6d. per ton. Indeed, it is the smallness of the present output and the cost of opening new works which now render the cost so high.

The second seam runs from 2 ft. to 2 ft. 4 in. thick, and is of the same quality as the first. The roof and bottom of this seam being of hard rock, a minimum of timber is required, and it is anticipated that when thoroughly and properly opened out the coal can be put into trucks and all expenses paid for from 5s. to 5s. 6d. per ton, leaving, it will be seen, a large margin for profit. I find on an investigation of the books that the cost for timber is only 1½d. per ton, which is considerably below the average, some collieries requiring as much as four or five times this quantity. The amount of coal I now estimate to be unworked is as follows:—No. 1 seam, 860,000 tons; No. 2 seam, 1,280,000 tons: total, 2,140,000 tons, which at the rate of (say) 300 tons per day would last for a term of 28 years.

This property, however, is the key to a large amount of land from which the coal can only be taken through the Black Rock Colliery, or rather the difficulties in the way of working these other lands from any other quarter would be such as to render it almost impossible to raise the coal at a profit. The estimated quantity of coal which is contained in the estate is, therefore, not to be taken as all that may be obtained, but is is useless to burden the company with a larger dead rent than necessary, as any of the adjoining land may be obtained as soon as the works become sufficiently extended and they can be advantageously worked. A reference to the plan herewith will make this perfectly clear, and without taking into consideration anything on the western side of the west fault, or to the north of the property, the land between that fault and the company's western boundary would yield an additional 227,500 tons (bottom coal). To the west and north several hundreds of acres of new land may be obtained.

I should mention also that the royalty is only 7d. per ton of 2520 lbs., or 6d. per imperial ton of 20 cwts. About 25 acres, however, have been sublet at an improved royalty—2s. per ton. As I have not seen the plans of this part of the estate I have not considered this 25 acres when calculating the amount of coal in the property. Neither have I taken anything into my calculations for the pillars left by the past owner, and which would amount to many thousands of tons. The 2,000,000 odd tons mentioned above may, therefore, be taken as being perfectly clear, and considerably within the mark.

The two present seams are worked by adit, which does away with the expense of hauling, and the necessity of having expensive machinery. The coal is brought in the trams (of which there are over 70) by horses to the surface, and from thence sent down by an incline tramway to the railway, a distance in the case of the No. 1 seam of 500 yards, and in the second of about 300 yards.

The machinery and plant is of very durable character, and a large portion nearly new. There are good offices, smiths' shop, carpenters' shops, and stables; nine horses, about 70 tram wagons, and nearly a new engine, and air-compressor. This engine, I am informed, has only been at work eight months. It has a single cylinder 18 in. diameter, and 3 ft. 6 in. stroke; two vertical boilers 4 ft. 6 in. diameter and 12 ft. high, and an old egg-end boiler used as an air tank. The air is forced into the workings in both levels, where it works two small engines of the Tangye pattern for pumping purposes. The one in the top level is 8 in. diameter, and has a 16-in. strok. The one in the bottom level is trifle smaller. In case of accidents there is an older engine of the horizontal type, and having a diameter of 12 in. and a stroke of 16 in., and worked by two boilers, one a Cornish flue boiler and the other an egg end, the first being 21 ft. and the second 15 ft. long. There are 40 railway wagons, which have been obtained on the seven-years purchase system, the contract having little over two years to run, after which they will become the entire property of the company. Besides the two seams mentioned, which are being worked by adit or day level, there are below the celebrated Rhondda seams, as well as all the steam coals in the South Wales coal field.

I have gone very carefully into the accounts, and find that there have been raised during the past six months 8802 tons of coal, which have realised a profit of about 1200*l.*, or 2s. 9d. per ton. As, however, a much larger amount than that which has been deducted from the cost should have been charged against capital, 2s. 9d. does not by any means represent the profit which has actually been obtained upon the working, or give a criterion of what may be expected if the colliery be well and properly opened out. We can, therefore, hardly calculate upon a less profit under the most adverse circumstances than 2s. 6d. per ton, which, upon 300 tons per day, could give an annual profit of over 9000*l.*, or 36 per cent upon the capital of the company.—THOS. THOMPSON, jun.

THE NICKEL MINES OF NEW CALEDONIA.

[FROM OUR OWN CORRESPONDENT.]

The nickel mines are attracting great attention, and fresh reefs of well-defined nickel ore have been found, running as high as 40 to 50 per cent. of metallic nickel; but still there seems to be great ignorance in the mode of treatment. There are no works as yet erected, but hopes are expressed that the Percy and Kelly Company, which has been placed on the London market to raise sufficient capital to erect smelting and refining works for their own ores, will also treat the ores of the neighbouring mines, eight or nine in number. Great satisfaction was expressed here at the news received by the last mail from London that the Percy and Kelly Company had been favourably looked upon by the English capitalists, and I think with justice too, as the vendors, I am informed, take the whole of their purchase-money in shares and debentures—the interest and principal of the latter being paid only out of profits, and not, as is usual in such cases, out of capital. Nothing can be fairer, and show the *bona fides* of the vendors in clearer or more satisfactory manner, and the company will thus be enabled to start with a large balance at its bankers, without having any promotion money or other exorbitant expenses to pay. The mine certainly looks well, and a large quantity of the ore is already stacked for inspection by the engineer to be appointed and sent out by the company from London.

I understand that the Percy and Kelly Company has been amalgamated with the Grand Mount d'Or Company, thus forming one of the finest and largest nickel properties in New Caledonia, if not in the world. Already 178 tons of ore have been sent to Messrs. Montefiore's works in Belgium for treatment, and there are 200 tons more ready for shipment. I may add that the ore from the Percy and Kelly Mine can be extracted and delivered in London for about 4*l.* 2s. 6d. per ton.

The Balade Copper Mine has been inspected by the Commissioner of Mines, and he has valued it at 60,000,000 fr. This magnificent property belongs to Messrs. Higgenson, Morgan, and Co. The French Government are affording every facility to mineowners and English investors.

FOREIGN MINING AND METALLURGY.

There is little fresh to communicate with respect to the Belgian coal trade. The demand for domestic qualities of coal is increasing, but that prevailing for coal for industrial purposes is of little importance, and metallurgical industry must still be said to be in a depressed and suffering condition. Prices have experienced some fluctuations, and for the present quotations are not at all clearly defined. The quantity of foreign coal imported into Belgium for consumption last year was 454,869 tons; the corresponding total in 1873 was 671,836 tons. The quantity of coal exported from Belgium in 1874 was 3,902,000 tons. The quantity of coke imported into Belgium in 1874 was 9000 tons. The quantity of coke exported from Belgium in the same period was 599,000 tons. In 1872 the quantity of coal consumed in Belgium was 10,250,000 tons, or about 2 tons per each inhabitant. The corresponding consumption of coal in England in the same year was 114,550,000 tons, or about 3¾ tons per each inhabitaht. If the coal consumption of Belgium proceeded at the same rate as that of England, Belgium would be now consuming 19,000,000 tons of coal annually.

Advices from Bochum (Westphalia) state that coal has been tending upwards in that district. The collieries which produce the best gas coal have their production engaged for the whole season. The production of coal in the Westphalian portion of the Ruhr basin last year was 15,351,131 tons, as compared with 16,213,964 tons in 1873. A reduction of 5½ per cent. accordingly took place in the production last year. The reduction wonld probably have been greater last year, but for the fact that, in consequence of reductions of rates for the conveyance of coal for long distances, Westphalia found in 1874 new outlets for its coal in France, Belgium, and the Luxembourg. Deliveries of Westphalian coal have also been made of late to the Hanse Towns.

There is no want of propositions of new business upon the Belgian markets, but the sale prices current do not allow the Belgian works to carry on their operations with a sufficient profit. The principal Belgian establishments are sustaining an inveterate competition with each other, and this exercises a prejudicial influence upon the general situation. The terms upon which the last contract for steel rails was let by the Belgian Government, for the purposes of the Belgian State railways, can scarcely be pronounced remunerative. The pig-iron trade is in a suffering condition in Belgium; the condition of this industry calls, indeed, for serious consideration. In the Charleroi basin 28 blast-furnaces are idle out of 45 existing; during the past 12 months 12 furnaces in this district have been blown out. The competition of the Grand Duchy of Luxembourg has tended to bring about this unfortunate state of affairs. Business in iron plates has been moving on satisfactorily in Belgium; prices remain firm, and the quality of Belgian products is more and more appreciated. Contracts for steel tyres for locomotive tenders and trucks have just been let in Belgium, the former at 11*l.* 15s. 3d. per ton, and the latter at 11*l.* 3s. 4d. per ton. The Belgian tenders were lower than those delivered by competing German firms. It appears that in 1874 Belgium exported 109,144 tons of minerals, and imported 738,835 tons. Belgium exported last year 227,456 tons of manufactured iron.

The markets for iron and pig have been pretty well sustained in France, and prices have not fluctuated to any great extent either one way or the other. There is no absolute want of work, but at the same time there are few large orders on hand; no important variations in prices are anticipated until the spring.

Copper has been rather firmer at Paris; Chilian in bars has made 88*l.*; ditto ordinary descriptions, 86*l.*; ditto in ingots, 90*l.*; English tough cake, 90*l.*; and pure Corocoro minerals, 87*l.* per ton. Copper has been well supported at Marseilles. The German copper markets have presented a little more animation, and prices have been firmly maintained. Tin has been quiet upon the Paris market; Banca, delivered at Havre or Paris, has made 95*l.*; Straits ditto, 91*l.*; and English, delivered at Havre or Rouen, 90*l.* per ton. At Marseilles tin has maintained a good tone; at the same time transactions have not been very numerous. Advices from Rotterdam state that there has been comparatively little doing in tin upon that market; business has remained quiet, and prices have scarcely varied. Banca has made 52¾ fls. to 53 fls., and Billiton 50¼ fls.; some little demand has been noticed for Billiton. The tendency of the German tin markets has been rather feeble. The demand for lead has been inactive at Paris; French lead, delivered at Paris, has made 23*l.* 8s.; Spanish lead, delivered at Havre, 23*l.* 8s.; English lead, delivered at Havre, 23*l.* 4s.; and Belgian and German lead, delivered at Paris, 23*l.* 12s. per ton. The tone of the German lead markets has been rather less favourable; at the same time, prices have been sustained. Upon the Paris market Silesian zinc, delivered at Havre, has made 26*l.* 4s.; and other marks 26*l.* per ton. At Marseilles, Vieille-Montagne zinc in sheets has brought 34*l.* per ton. Upon the German zinc markets transactions have, to some extent, made default.

The Carmant Mines Company propose the payment of a dividend for the half-year of 30s. per share.

It is announced that the preliminary works for the Channel Tunnel will be commenced next week near Calais. A shaft will be sunk to a depth of 100 metres.

Among the most recent additions by the United States to its manufactures which are finding market in Great Britain is that of leather belting, the first invoice of which was shipped recently by a New York firm that use over 10,000 hides per annum in their Brooklyn works. This shipment was upon the order of Sir William Armstrong, the great gun manufacturer of England. In this order were included two belts of unusual dimensions, one being 2 ft. 8 in. wide and 94 ft. long, and the other 18 in. wide and 123 ft. long, and of double thickness.

Registration of New Companies.

The following joint-stock companies have been duly registered:—

MILLER'S FIRE INSURANCE COMPANY (Limited).—Capital 1,000,000*l.*, in 10*l.* shares. To carry on business as a fire insurance company, with an especial view to business with farmers and millers. The subscribers (who take 100 shares each) are—H. Barton, Bilston; J. Fairclough, Wallington; E. Evans, Aston Brook Mill, Birmingham; M. Raybould, Dudley; T. Disturnal, Walsall; C. H. Farmer, Fazeley, Staffordshire; T. S. Townshend, Worcester; J. W. Wall, Alcester.

MIDLAND BRICK AND TILE WORKS (Limited).—Capital 20,000*l.*, in 20*l.* shares. To carry on business as brick and tile manufacturers at Birmingham. The subscribers (who take 25 shares each) are—Roland Bourne, Birmingham; J. H——, Olton, near Solitull; S. Boyce, Havelock-road, Handsworth; E. M. Evans, Olton; H. Scott Smith, Olton; W. Barber, 17, Paradise-street, Birmingham; T. J. Fallows, Birmingham.

CHEMICAL METALLURGICAL COMPANY (Limited).—Capital 6000*l.*, in 1*l.* shares. To acquire patent rights in connection with a process for extracting metals from ores. The subscribers are—C. M. Reid, 55, New Bond street; J. Elliott, Gatcombe Lodge, Blackheath; E. S. Stewart, Avenue-road, Upper Norwood; D. G. Stewart, 14, St. James's-square; B. C. Molloy, 3, Plowden Buildings, Temple; Claude Hamilton, 19, Eaton-square; W. Brooke, 14, St. James-square; H. W. Spratt, 4, Lee-road, Blackheath.

DISTRICT OMNIBUS COMPANY (Limited).—Capital 50,000*l.*, in 1*l.* shares. To carry on business as omnibus and carriage proprietors. The subscribers are—C. Robertson, Woodfield, Alexandra Park, Manchester; W. Worthington, Whalley Range, Manchester; J. Edgar, Fern Hill, Whalley Range; T. Hyde, York-road, Manchester; A. S. Robertson, Drayton Villas, Manchester; J. Credland, Hulme; W. Teak, Lake View House, Alexandra Park, Manchester.

KINGSFORD'S TIDE MILL COMPANY (Limited).—Capital 15,000*l.*, in 100*l.* shares. To acquire the business of Messrs. T. and C. Kingsford, millers and biscuit bakers, Deptford. The subscribers (who take one share each) are—F. Kingsford, Seething-lane; J. Watney, 34, Clement's-lane; M. Kingsford, Littlehome; J. H. B. Harriss, Chelmsford; R. Kingsford, Sandgate; and C. Oakley, 10, Waterloo-place, S.W.

UNIVERSAL DRY GOODS AND CONDIMENT COMPANY (Limited).—Capital 5000*l.*, in 1*l.* shares. To acquire the business of Messrs. Prendergast, Batchelor, and Co., dry goods merchants.

WETHERBY AND DISTRICT GASLIGHT COMPANY (Limited).—Capital 6000*l.*, in 10*l.* shares. To supply gas to Wetherby and district, Yorkshire.

WIGAN JUNCTION COLLIERY COMPANY (Limited).—Capital 100,000*l.*, in 100*l.* shares. To acquire from Mr. Egerton Leigh Wright certain collieries at Abram, near Wigan, and to carry on business as coal proprietors, &c. The subscribers (who take five shares each) are—J. Turner, Wigan, colliery proprietor; F. Hardcastle, Firwood, Bolton, bleacher; E. L. Wright, Wigan; E. Hardcastle, Firwood, colliery proprietor; T. C. Wright, Lincoln's Inn, barrister; R. B. Wright, rector of Frinsted, near Sittingbourne. The directors are not yet appointed.

FRON HALL UNITED LEAD MINING COMPANY (Limited).—Capital 50,000*l.*, in 1*l.* shares. To acquire the leases of the Fron Hall United Mines, in the county of Flint, held by Mr. E. H. Walm and others, according to an agreement made between the present holders and Joseph Hartley, of Ormskirk, on behalf of the company. The subscribers are—J. Barnes, 14, Derby-road, Southport, railway contractor, 5000; J. B. Squire, C.E., Chatburn, Clitheroe, 100; S. E. Jones, 90, Northgate-street, Chester, butcher, 1000; R. Bentney, 136, Lord-street, Southport, land agent, 2000; R. Jenkins, Chester, no occupation; L. Hirrell, Baglent Foundry, Flint, engineer, 100; G. H. Adams, Mold, draper and grocer, 500; G. F. Wynne, Chester, shoe manufacturer, 1500. The qualification for a director is the holding of 100 shares.

HECLA FIRE INSURANCE COMPANY (Limited). — Capital 100,000*l.*, in 2*l.* shares. To carry on the general business of a fire insurance company. The subscribers (who take one share each) are—W. Shepherd, 39, Lombard-street; A. Billoule, Camden Villa, Sydenham; C. Vaht, 15, Queen-street, Cheapside; F. Woodbridge, 37, Patshull-road, Kentish Town; E. A. Hussey, Seven Sisters-road; R. Fox, Seven Sisters-road; and W. Perks, 35, Seething-lane.

LIMEBANK SEWING MACHINE MANUFACTURING COMPANY (Limited).—Capital 25,000*l.*, in 5*l.* shares. To carry on business as sewing machine manufacturers. The subscribers (who take one share each) are—W. Pitt, 13, South King-street, Manchester; G. Lowe, 5, Princes-street, Manchester; J. Rickman, 13, South King-street; C. Pitt, 117, Bloomsbury, Manchester; E. Richardson, Rusholme; H. Bolton, Oldham; and M. G. Donald, 31, Spring Gardens, Manchester.

CITY OF CAMPOS WATERWORKS AND DRAINAGE CORPORATION (Limited).—Capital 240,000*l.*, in 5*l.* shares. To carry out drainage operations at Campos, Province of Rio de Janeiro, as authorised by a decree of the Legislative Assembly. The subscribers (who take one shares each) are—J. H. Cox, 155, Fenchurch-street; Horace Taunton, 305, Old Kent-road; James Paulett, 30, Bouverie-street; R. A. Feast, 43, Munster-square, Regent's Park; H. Parker, 17, High-street, Marylebone; W. Payne, Buckingham Palace-road; C. P. Brown, Garrick-House, Catherine-street, Strand.

MINING NOTABILIA

[EXTRACTS FROM OUR MINING CORRESPONDENCE.]

CHAPEL HOUSE COLLIERY.—Notwithstanding the unfavourable weather which has materially interfered with the operations of many collieries in its neighbourhood this company raised over 6200 tons of coal during the past month, which was sold at prices exceeding the average market rate and leaving a substantial profit for the company. The new pit is now down to a depth of 190 yards, all of which has been sunk during the present year, and the work is still going on at the old rate of 4 to 5 yards per week. All the other new works are progressing satisfactorily, the walling of the enlarged reservoir rapidly proceeding, while special attention and energy is being devoted to the completion of the erection of the new engines, &c. The shares have risen during the week, and may now be quoted at 4¼ to 4½.

ST. AGNES CONSOLS.—The water is freely issuing from the cross cut driving towards Wheal Kitty lode, and there are indications of near approach to the same.

NEW CAROLINE.—This lode has been opened on and proved for about 120 fms. in length. The lode for the whole distance is composed of the most promising description for one of the greatest deposits of copper ore ever discovered in the county of Cornwall. The stratum is composed of pale-blue killas, or clay-slate, and grey or decomposed elvan or porphyry, exceedingly congenial for large deposits of the richest description of copper ores, particularly as the sett, or mine, is surrounded by some of the best mines ever discovered in the county of Cornwall. The lode is from 8 to 12 ft. wide, composed chiefly of gossan to the depth of 12 or 14 fms. from surface; it then changes into a black oxide of copper. This leader in about the centre of the lode was at first a few inches wide, and in sinking a winze some 2 fms. it is increasing in size from 2 to 3 ft. in width. The lode is also increasing in size near the surface, where it is about 3 ft. wide, but at the 16 fm. level from surface it is from 8 to 12 ft. in width.

CARGOLL.—Capt. Jennings, in his report, says—"I am pleased to state that we sold a small parcel of silver-lead ore this week, weighing 4 tons 9 cwts. 2 qrs., from the winze in adit level east, as referred to, which realised 144*l.* 7s. 5d., or 32*l.* 8s. 6d. per ton, thus showing that the lode on which we are operating is considerably more than an ordinary speculation. We have also sold 1 ton 13 cwts. of copper ore, at 12*l.* 8s. per ton."

AMBROSE LAKE.—We are glad to see that the indomitable perseverance of this company is about to be rewarded with success. They have expended a large amount of capital in developing the mine, and about two months ago they cut a fine copper lode; a portion of this lode has been worked upon in an adjoining mine, and over 170,000*l.* worth of copper ore was raised therefrom. The lode is now valued at from 4 to 5 tons of copper ore per fathom. The large volume of water which came from the lode necessitated the putting down of a larger lift of pumps, and they are now working with vigour. Already a parcel of 26 tons of copper ore has been sold, and a similar quantity is now ready for sale, with a prospect of at least 50 tons per month being sent to market. We are pleased to find also that they are utilising the low description of mundic; ovens have been erected for burning it, and a good percentage of arsenic is being obtained. Altogether the prospects of the company must be very cheering to the shareholders. A great enquiry for the shares seems to have sprung up in the neighbourhood of the mine.

ECHOES FROM THE MINING MARKET.

The mining market has been well supported throughout the week, and activity has been particularly apparent in lead, copper, and colliery shares. Although tin remains practically unaltered, there is but little doing in tin shares, probably investors and others are waiting to see what the next move in the metal will be. The ore continues to be stocked, we hear, at several of the leading mines, which indicates expectations of a further advance on the part of mining managers; but the importation of Australian metal still continues to act as a check upon the market. This trade is now assuming rather a novel feature, for it is said an influential London firm has commenced smelting the tin on the banks of the Thames. The blocks are stamped with the well-known lamb and flag, much to the annoyance of the English smelters, who have for so many years—almost centuries—sold their best English tin under this mark, which, however, it seems has never been registered as a trade mark. This mode of action, coupled with underselling by about 1*l.* per ton, is likely to have an injurious effect upon the price of English tin, and the smelters seem hardly to know how to treat the matter. The present price of Cornish ore—that is the best—is about 54*l.* 10s. per ton, but some managers are, it is said, looking for 60*l.* We hope they may not see the price—50*l.* first. Copper has been rather weaker, and the standard has declined 1*l.* Lead is unchanged, but then little change is expected in this metal, which must be regarded as the steadiest of all.

The following will be found the principal items of intelligence from Cornwall on the week:—The returns of tin are increasing at Carn Brea, but not much business is doing in the shares. The newly amalgamated mines of Mary, Margaret, and Kitty are being energetically worked. Three engines are pumping the water, and the mines are being drained at the rate of 2½ in. per hour, with an economical consumption of coal. Buller sale was held on Thursday last, but the affair was a very languid one. The engines were not sold in consequence of the reserve price being above the figures offered. Balmynheer Mine, in Wendron, has just sold more than 40 tons of tin, at 51*l.* per ton. The boring machine at Dolcoath is getting on very well. It has had to be suspended, however, owing to a pipe having fouled, but since starting again it has bored hard ground at the rate of 3 or 4 in. per minute. So far as large lodes are concerned the experiment is considered a success, we believe, but it is doubtful whether the same result would follow its application to small lodes. We hear there is a good deal of tin in stock at this mine—something like 400 tons, which at present prices would be worth upwards of 20,000*l.* Coal has been economised of late, to the great advantage of the adventures. At Wheal Agar, the East Pool lode has been cut into, but the men are not yet through it; so far as seen it is a productive lode for tin. The shares are quoted about 4*l.*, but the business done in them is by no means extensive; indeed, we should say the price is more what, strictly speaking, it professes to be—a "quotation" than a realisable price, for we have not seen any shares change hands of late. There is a good improvement at East Pool also, but the discovery is copper. A dividend of 5s. per share is looked for at the next meeting. Cook's Kitchen is looking well, and it is reported that the water in the sump is of a tepid character—a feature looked upon as a favourable one.

West Seton is in debt to the extent of 5000*l.*; and, as 2000*l.* more will be required to pay off out-going adventurers upon relinquishment account, financial matters on the first blush do not look very bright. But there is a silver lining to the cloud. Shares are at present marketable at about 70*l.*, so the 109 relinquished shares might, if the market be not seriously depreciated by the fact of their being for sale, realise enough not only to pay off the liabilities, but the out-going adventurers also. We know a market price in a high-priced share is rather an uncertain affair, especially in the face of a plentiful supply, but there is a good chance of no call being required. The mine, too, is looking very well. The lode in the 140 is worth 12 tons of copper ore per fathom—an excellent lode. In the 130 the same lode yields good stones of ore. Pneumatic stamps are about to be tried at this mine—Sholl's patent. Tincroft is reported to be looking very well also. At West Frances they expect very soon to cut the Great Flat lode.

In lead mines the principal business done has been in Tankerville, Roman Gravels, Van, Pateley Bridge, Plynlimmon, Great Laxey, Van Consols, West Tankerville, and Pennerley; and in copper, Parys Mountain, West Maria, Crebor, and the principal Cornish copper mines. There is a fair report from Bampfylde, but the shares are very weak at 12s. 6d. to 17s. 6d. The various ends are worth in the aggregate 40*l.* per fathom.

The colliery share market has been actively supported. In Chapel House, at 4⅞ to 4¾, a large business has again been done. Good progress continues to be made at the works, and the new pit is now down 188 yards. By the end of February next it is expected a depth of 289 yards will be reached, and by the end of 1876, it is hoped, the whole depth—400 yards—will be attained. Considerable dissatisfaction continues to be expressed by the shareholders of Thorp's Gawber Hall at their being compelled to receive their nominal dividend of 10s. per share in paid-up shares, or fractions of shares, at par. As the market price is but 6*l.* 10s. to 7*l.* per 10*l.* paid-up share the loss in conversion into cash amounts to about 40 per cent. The directors are much blamed for declaring such high dividends a year or two ago (40 per cent. per annum) instead of forming a reserve fund, and for not issuing their unallotted capital some time since, when the money could easily have been obtained. The worst possible period has been taken for its issue, and now it is in the character really of a forced allotment. It will be remembered this company in a little more than two years paid over 100 per cent. in dividends, or more than its entire capital back again. But as the shares went up to a good premium, those who bought in at high prices are naturally indignant at the turn matters have taken. We had occasion to deprecate the action of the directors some time since in these columns, and we do so again. The next meeting is likely to prove a very stormy one. A good business has been done in Cardiff and Swansea, 8*l.* paid, and the market for the shares has consequently improved. Business has also been done in Bilson and Crump, and in several other companies less known upon the market. Looking at the present aspect of the colliery market it is worthy of note that prices are generally advancing.

There has been plenty of business doing in foreign shares. Those most prominently dealt in have been Cape Copper, Emma, Frontino, Flagstaff, Richmond, Colorado Terrible, Eberhardt, Sweetland Creek, Chontales, Don Pedro, Javali, Sierra Buttes, and Port Phillip. On the whole prices have been steady, although Javali have shown symptoms of weakness. Eberhardt and Emma have improved.

JAMES H. CROFTS.

BRITISH TRADE; OR, CERTAIN CONDITIONS OF OUR NATIONAL PROSPERITY.

All men are too ready to ask advice from those whom they know beforehand entertain the same views as themselves, and even those who are wise enough to consult acknowledged authorities upon a given point very seldom act upon the advice given them unless their preconceived notions correspond with it. It is to the very general existence of this feeling—and to that alone—that will have to be attributed any want of earnest attention to, and application of, the principles laid down in the admirable little volume* by Prof. KIRK, of Edinburgh, which may be briefly summed up in very few words—that men are utterly unfit for co-operative combination unless they are thoroughly aware that loss must be shared as well as gain, and risk consequently incurred on the part of all equally; and that labour in itself is worth nothing—the result alone being worth anything. He points out that there are three lines of thinking along which British traders are now proceeding—one class is producing wealth and disposing of it nearly without serious thought of the subject. These form a very large class indeed. Their thinking is all about something else than trade—something, in fact, utterly alien to it; for example, their greyhounds, or their dogs of other kinds, together with ten thousand varieties of mere pastime, absorb them absolutely or nearly so. By means of tobacco and liquor, too, many of them so narcotise their thinking faculties that they have not very much that can be called thought to be absorbed. Another vastly important class do think, and that with great energy and resolution; but they think falsely. These think so falsely as to bring the most dire calamities on themselves and their fellow-men. For instance, they believe, as they do in their own very existence, that the less they and others produce the better. They believe that the more that is destroyed the better. When a large new ship goes down with all hands, or a great new building is burned to the ground, they actually congratulate one another that the replacement of the material erections will give work to hundreds, and that the drowned men will not compete with survivors. There is a third and growing class of men who have true thought, and pursue it. These are more numerous than appear, and that in a great measure because one of their ideas is that war and trade are antagonists.

After pointing out that it is often absolutely necessary to meet strikes by lock-outs, he remarks that an informed workmen knows that if his employer has only the clear profit of a farthing an hour from his labour, and has (say) 500 men employed, that employer may soon be a very rich man. Even with short hours—that is 26*l.* a week—a good way above 1300*l.* a-year. If this employer have 1000 men it is doubled. Raise the wages a halfpenny an hour, and the master will soon succumb, even if he be very wealthy, yet the thing is only one of farthings. But the well-informed man is fully possessed with this idea, and he feels that so far as his individual labour is concerned his employer reaps a very humble percentage indeed; he would rather see it doubled than annihilated. Though this thought on the part of the workmen is incalculably valuable in trade, so is it on the part of employers. It is only if these are able to make it profitable for those who receive their goods that trade is ever possible as a continuous thing, and only if they can make it handsomely profitable that the strong spirit of enterprise can be cultivated. Where this truth is clearly seen by workmen and masters, and they unite to lay liberally at the feet of the world, trade with them comes in the very nature of things. The chapter on Time in trade is excellent. He remarks that the workmen reach the place where the actual results of their labour is required "by measured steps and slow." Then they are seated, and tobacco is cut and rubbed duly. The pipes are charged, and very solemnly lighted. We watch the curling of "the golden cloud" as "Cope's choicest" rises on the morning air. Before this sacrifice is complete the first "hour" has passed away. We consider, then, what we have received for our shilling in the man's case, and 8d. in that of the lad. We have got our full "time" for the money. What then is time? It is exactly nothing. A squad of men lately got Belgian iron to work in their master's service. They were paid "by the hour." During the course of one day they assembled for solemn consultation as to whether they could countenance "foreign produce" so far as to work Belgian iron. They continued exactly an hour in debate, and resolved to refuse to touch these foreign bars. The master took a note of the hour, and when pay-night came deducted the money proper for that hour from the men's wages—they were indignant. They would "strike" unless he paid for the hour, and, moreover, ceased to use Belgian iron. So he dismissed the lot, and declined to employ any of them again. What was it for which he declined to pay? Just nothing. So time apart from the production of useful effects, while as we say it flies, is just nothing. To make a master or customer pay for such "time" is to make him pay for "nothing" in good hard cash. When men rebel against being paid for the results which they produce by their labour, and insist on being paid by the hour, there is always something doubtful, to say the least, in their principles. There is a wonderfully possible idea which is apt to be among these principles in such a case, and that is the notion of getting paid for nothing under the name of time. It should be carefully remembered in connection with all such ideas that one never makes nothing something by calling it an hour or a day, or a month, or even a year. Multiply nothing by millions, it never grows any more substantial, whatever philosophers may say. Nor does the deception which puts nothing forward, so as to get it paid for, ever fail to fall ultimately on the head of him who palms it off upon his fellow-creatures. The deception is something, though it works upon that which is in reality nothing. It is work in time or in season which is wanted, and that alone.

What are called Trades Unions, and also what are called Masters' Associations, have come, as Prof. Kirk very truly says, to be matters of very great importance in the study of national prosperity. He says nothing either for or against combination, but he makes a statement which, if properly considered, puts the matter in its true light. "Union is strength." Sometimes it is, beyond all doubt, but not always. In all cases in which there is real power in the individual, and a number of such individuals unite, their united force brought to bear all at once will do what could not be accomplished if they exerted themselves one by one, and at different times. This is palpably true. But it is just as true that where there is no power in the individual the union of any number of such individuals gives none. No union of ciphers can possibly amount to anything. For example, if one man has it in his power in the slightest degree to force a master in the direction of yielding to his demand in trade matters, two such men have double that power, a hundred men a hundred times, and so on. But if circumstances are such that one man has no such power—if, as often happens, a man's leaving off work suits the master rather than hurts him—then any number of men so situated have no strength by means of their union. This by no means argues that union is a bad thing, nor that it is a worthless thing, but it suggests the truth that dependence on the mere fact of union, and what is called organisation, must lead in certain cases to melancholy failure. To form something like an estimate of the effect of unions on the part of employers, and also on the part of workmen on trade itself, we must, Prof. Kirk continues, give special heed to two things. The first of these is the available wages fund, and the second is the mind of those who have wages to pay. The available wages fund, however, is neither more nor less than the sum of goods produced by labour. If by labour in various forms and various times we suppose six workmen producing a quarter of wheat, these men may get that wheat divided among them, but assuredly they can get no more. That which is not produced cannot be divided. These men may get the whole produce divided among them, so that others who own the land on which the wheat is grown, and those who furnish the capital necessary to its growth, may get nothing. If some return is to be allowed on the land, and some little interest on capital, then the possible wages are so much the less. Now, a strike or a lock-out arrests production, and makes the possible wages-fund so much the less. That produce which, in being divided, forms the wages and profits cannot give larger dividends by being itself reduced. To say that there is a trades union is only to say that there is a combination by which, at any time, production may be made to cease, and hence that the fund out of which wages and profits are paid may be made considerably less than it would otherwise be. As light dawns upon the minds of men in general, Prof. Kirk is strongly persuaded that they will learn to put away from them these ruinously costly and not very efficient modes of keeping each other by force somewhat near the golden rule.

In pointing to Romanism as the perfection of trades unionism, Professor Kirk makes, perhaps, the most correct comparison that could be suggested—both those isms involve the acceptance without enquiry of the word, however false, of one solitary human being, and whether it be the Pope or the trades union leader the effect is equally prejudicial to those who foolishly neglect to think for themselves, and thus place their welfare or their soul, as the case may be, at the mercy of those whose selfishness and cunning are turned to pecuniary account at the expense of their dupes. The word of command of that secretary or committee, says Prof. Kirk, is obeyed as is that of the Pope. The unionists have sometimes doomed workmen and their families to starvation because these workmen declined to be ruled by such a word! Because their employers would not put the decree in force these precious unionists have struck work, as much as to say—We will starve ourselves and our families if you will not starve these wretches at our committee's command! This is unionism precisely of the same type with that of the old man at Rome. "Union is strength"—no one need doubt that—but we learn sometimes to our cost that strength is not always desirable.

We are sometimes, he continues, disposed to think that the time is not far off when a good many men will be disposed to look into this matter. Society is fast becoming ripe for a change. Eyes that have been long blind must be opened ere very long. It will be seen that all unionism by which individual freedom is cramped, or even rendered unwelcome in its development, will be just as strongly hated as it has been loved. It will occur to thoughtful minds that it is only the most stinted hearts that can lead in a unionism that shuts out the exercise of individual freedom. The really noble mind hates the work of curbing such freedom, and even if for a short time led to engage in that work speedily shrinks from the task. Such a mind is from its very nature constrained to admire the heroic spirit that dares to think for itself amid a crowd that prefer that others think for them. If necessary, expatriate forever the men who make wealth out of the degradation and sins of their fellows—hunt away the poltroons who are for ever crying out for "easier jobs," and crown with laurels the men who increase to the utmost the good of mankind. Make the owner of well gotten gain feel that he has gained indeed, but above all make all men feel that it is a happy thing to have dealings with us. Do you sneer and say that all this is Utopian? Then we tell you that you will be starved into this very Utopia. You will be forced into it. "Wages as in 1870"—well, that means starting for fresh prosperity, as we did then. But how much better it would have been to hold on, and not need to start anew?

Throughout the volume Prof. Kirk displays an acquaintance with the minutest details connected with the working of trades unionism—details which can scarcely be ascertained at all by outsiders—and he has thus been able to show in the clearest light why Unionism is antagonistic to the welfare of those who are duped into the belief that combination can effect that which the ordinary principles of trade render impracticable. The style of writing is just such as will suit the classes for which it is intended; it is short, and to the point, not a word being introduced which will not be intelligible to every reader. The work is one which cannot be too widely circulated among working men, for although the delegates will, doubtless, attempt to cry it down because it explains the true position that they themselves occupy, it will be the working men that will be most benefited by the publication of the truths put forth. Every argument is thoroughly sound, and set out so clearly that all who read the work will be led to think for themselves, and will profit accordingly.

* "British Trade; or, Certain Conditions of our National Prosperity." By Prof. KIRK, Edinburgh. London: Hamilton, Adams, and Co.

COUNTY TOPOGRAPHIES—THE MINERALS OF SOMERSETSHIRE.—The excellent series of County Topographies now being edited by Mr. E. R. Kelly, M.A. (published by Messrs. Kelly and Co., Great Queen-street), has been already noticed in the *Mining Journal*, and the publication of the fourth volume—Topography of Somersetshire—enables a brief reference to be made to the minerals of Somersetshire. Mr. Kelly remarks that the chief mineral productions are coal, lead, and ironstone; manganese, limestone, freestone, and various other kinds of stone are found all over the county; fuller's earth, marl, and ochre are also occasionally found. The iron ore is obtained mostly from the Brendon Hills, known as spathose ore, and exported to Ebbw Vale; some ore obtained in Ashton Vale is used in the county in the manufacture of pig-iron, of which about 7000 tons is produced. There are lead mines near Wellington, and lead is washed from the old mines on the Mendip Hills. There are slate quarries at Wivelescombe. The coal beds constitute the most southern deposit of that mineral in England: the deposit is comparatively small, and lies northward of the eastern part of the Mendip Hills. Calamine was formerly worked at Churchill, Rowberrow, Winscombe, and Wrington, but from a change in the manufacture of brass it is not now sought after. There is a complete list of the Poor Law Unions; a list of the hundreds, with the parishes comprised in each, a list of the high sheriffs for the county from 1688 to 1875, both inclusive. Such list as the last are always of the utmost interest in the locality, since the narration of the antiquity of families, whether the Strodes, the Horners, the Fownes Luttrells, the Champneys, and so on have longest held a prominent interest in a county is almost the only topic, in addition to the sanitary and parish matters, for conversation. From half a page to a couple of pages is devoted to the particulars of each township, the whole forming a handsome volume of over 550 pages. The series when completed will form a handsome topographical library, whilst the price—5s. per volume—places it within the reach of all.

TECHNICAL EDUCATION—HEAT.—A very useful collection of examples, intended to familiarise the student with the formulæ and tables found in most of the elementary treatises on Heat has been prepared by Mr. R. E. Day, M.A. ("Numerical Examples in Heat." London: Longmans, Green, and Co.), for the use of teachers and students preparing for science examinations. Most of the examples appear to have been well chosen for exercising the student's mind, and they have the advantage of being practical. For instance—"Assuming that a difference of level of 596 ft. produce a difference in the boiling point of water of 1° Fahr., and that at the level of the sea with the barometer at 30 in. the boiling point of water is 212° Fahr. Find the heights of the following places:—Hospice of the St. Gothard, where water boils at 199·6° Fahr.; Dijon, 210·6° Fahr.; Dresden, 211·3° Fahr.; Berlin, 211·6° Fahr.; and summit of Mount Blanc, 185·8° Fahr." The value of all works of this this character is much enhanced by the answers to the several examples being accurately given, as the student is thus enabled to ascertain with readiness whether his work has been correctly performed. Mr. Day has given the answers wherever necessary; those for the foregoing examples being stated as 6, 808, 712, 295, 131 respectively. It would have been still more useful if the author explained concisely the rules by which the results are obtained, but as they stand they will, of course, exercise the student's ingenuity to a greater degree. The examples include—conversion of thermometric scales, linear expansion of bodies, cubical expansion of solids, liquids, and gases, apparent and real expansion, density of the atmosphere, latent heat of water, tension and vapours and hygrometry, density of vapours, connection between the boiling point and the pressure, latent heat of vapour, specific heat, mechanical equivalent of heat, and conduction of heat. In books of this kind it is impracticable to test the answers to the whole of the questions, but the above may be taken to represent the average accuracy. The examples are well calculated to answer the purpose for which they have been collected, and doubtless many teachers will be willing to use it in their classes.

ALMADA AND TIRITO CONSOLIDATED SILVER MINING COMPANY.—Attention is drawn to the very important telegram from the company's superintendent, Mr. Breach, which appears in another column. As it may not be fully understood from its necessarily brief character, it may be thus explained. The telegram commences—"Ore in Mina Grande twelve, and tunnel winze." The company have been sinking a winze in Mina Grande in the tunnel level, by the side of the lode, and at the same time have been driving a level from the main shaft—Balvaneca—at 12 fms. below the tunnel, to meet the above winze. The telegram says that there is ore in this winze and in the 12. Mr. Breach has already, on a previous occasion, reported that there was good ore at the tunnel level for 120 ft. long, that its width was about 20 ft., and that the ore was very good quality. It is evident that the winze and 12 fathom level have cut into this rich bunch, and that large supplies of ore may shortly be expected from the 12, which will, of course, be extended under the bunch as rapidly as possible. The telegram then proceeds—"Promising lode, black ore, Providencia." This, again, is very important, as it is new ground, further north from the Tirito than any ore that had been previously discovered. The next passage is—"Furnace working well." This is a furnace that has been recently erected to carry out the lixiviation process recommended to be adopted by Mr. Clemes. This process has been already working satisfactorily in Mexico on ores of a similar class to the Almada ores, and as sulphur and lime are abundant and cheap there is every reason to expect that the process will prove a great success. The next paragraph gives the profit for September, amounting to $7684, which is a great improvement on July and August returns, and may be considered quite satisfactory. The concluding paragraph is—"New lode, Providencia, eight feet wide, improving." This is by far the most important part of the telegram, as it reports a discovery of ore about midway between "Tirito" and "Mina Grande," in a part of the property which has been hitherto supposed to be barren of ore. Of course, the exact bearings of this discovery cannot be appreciated without a careful study of the plan and section, which can always be seen in the company's office. The shareholders may be sincerely congratulated on this important news, and it may be hoped that the lode in Providencia may improve still further on its being developed north and south.

Died,—on Oct. 18, aged 64, at Park Cottages, Haverstock Hill, HENRY VON USTER, F.G.S., an old and valued correspondent of the *Mining Journal*. Mr. Von Uster was by birth a Tyrolese, receiving his education as a mining engineer in Germany, but for considerably more than a quarter of a century his practice was confined entirely to the United Kingdom, where he had had a very large experience in Ireland, Wales, and Cornwall, his genial and pleasant manner, although strict in discipline, at all times securing him the best feelings from the miners under his superintendence. Many years since he filled the post of Professor of German at the College of Engineering, at Putney. On Oct. 1 he was stricken with paralysis, and remained all but unconscious until his decease. His death will be deeply regretted by a large number of friends in many of the principal mining districts.

The Panulcillo Copper Company (Limited) give notice of the drawing yesterday of 20 bonds, amounting to 2000*l.*, which will be paid off at par on December 15 next.

EPPS'S COCOA—GRATEFUL AND COMFORTING.—"By a thorough knowledge of the natural laws which govern the operations of digestion and nutrition, and by a careful application of the fine properties of well-selected cocoa, Mr. Epps has provided our breakfast tables with a delicately flavoured beverage which may save us many heavy doctors' bills. It is by the judicious use of such articles of diet that a constitution may be gradually built up until strong enough to resist every tendency to disease. Hundreds of subtle maladies are floating around us ready to attack wherever there is a weak point. We may escape many a fatal shaft by keeping ourselves well fortified with pure blood and a properly nourished frame."—*Civil Service Gazette.*

Mining Correspondence.

BRITISH MINES.

ABERDAUNANT.—Oct. 20: In No. 1 adit level driving east the lode at present is not so good as it was last week; it is now producing stones of lead, but not sufficient to value. The stope in the roof of this level continues much the same as reported last week, and is worth 17*l.* per cubic fathom for lead.

BAMPFYLDE.—Jas. Juleff, Oct. 20: We beg to inform you that the following bargains have been let:—The 112 to drive west of No. 4 shaft, by six men, at 10*l.* per fathom; lode worth 8*l.* per fathom. No. 1 stope, in the back of the 112, by six men, at 5*l.* per fathom; the lode is worth 8*l.* per fathom. No. 2 stope, in the back of the 112, by six men, at 4*l.* per fathom; the lode is worth 9*l.* per fathom. No. 3 stope, in back of the 112, by six men, at 4*l.* per fathom; lode worth 10*l.* per fathom. The 102 to drive west of No. 4 shaft, by four men, at 8*l.* per fathom; the lode is worth 5*l.* per fathom, with a kindly appearance. A pitch in the back of the 90, by two men, at 10s. tribute in 1*l.* We have now a sufficient quantity of water to drive all the machinery.

BEDFORD CONSOLS.—G. Rowe, J. Mitchell, Oct. 19: The lode in the winze sinking below the 57 level is still showing a very kindly appearance, producing mundic and fine stones of ore. The lode in the stopes in the back of the shallow adit is looking well, producing from 3 to 5 tons of mundic per fathom. All other points are without change.

BEDFORD UNITED.—Wm. Phillips, Oct. 21: We continue to drive by the side of the lode in different levels. The stopes throughout the mine are still looking well, and we intend sampling again on the 29th inst.

BOG.—W. T. Harris, J. Barkell, Oct. 20: We do not see any material alteration in the prospects of the mine worthy of remark since our last report. The various bargains and pitches are yielding good quantities of blende, and promising for lead. To-day we have sent out samples for the sale of 40 tons lead and 100 tons of blende on the 27th inst. Friday next being our setting day a full report shall be sent you next week.

BRONFLOYD.—J. Davis, Oct. 21: No. 3 shaft is down the required depth for another level below the 96 since Saturday, and the men are now fixing bed-planks and divisions. This work I expect to complete by Saturday next, and on Monday we shall commence the cross-cut for the lode. There is no material change in any of the stopes on the north lode. At the 73 east we are cross-cutting for the north wall of the lode, to reach which we have about 2 fms. more to drive. The new arrangements for drawing the ore from the middle lode through No. 2 shaft are completed, and working quite satisfactorily. We shall now resume operations on the middle lode at once.

CALDBECK FELLS.—J. Polglase, Oct. 15: The bottom of the 20 is poor both in the shaft and in the stope. The 90 end continues poor. The stopes in the back of the 80 will produce from 1 ton to 30 cwts. of lead per fathom.

CRENVER AND WHEAL ABRAHAM UNITED.—Wm. Thomas, S. Arthur, Oct. 20; Sturt's Engine-Shaft: In the 228, driving west, the lode is 3 ft. wide, producing a little copper ore.—St. George's Shaft: In the 215, driving west, the lode is 3½ ft. wide, and will yield 3 tons of copper ore per fathom; we have placed eight men in this end in order to communicate with the 220, driving east from Woolf's shaft, as quickly as possible. In the 215, driving east on the south lode and west of the shaft, the lode is 1½ ft. wide, occasionally yielding stones of copper ore.—Woolf's Shaft: In sinking this shaft below the 220 the lode is 5 ft. wide, yielding stones of good copper ore. In the 220, driving east, the lode is 4 ft. wide, and produces 4 tons of copper ore per fathom.—Blewitt's Shaft: In the 234, driving west, the lode is 4 ft. wide, yielding a little copper ore.—Richard's Shaft: In the 220 fm. level, driving west, the lode is 6 ft. wide, and producing 2½ tons of copper ore per fathom. In the 210, driving west, the lode is 4 ft. wide, and yields 2 tons of copper ore per fathom; the lode in this end has a very kindly appearance. In the 200, driving west, the lode 2½ ft. wide, producing a little copper ore. In the winze sinking below the 200 the lode is 4½ ft. wide, yielding a little copper ore. We sampled yesterday (computed) 228 tons of copper ore.

CWM ELAN (New).—Wm. Goldsworthy, Oct. 16: The 30, west of shaft, is let to drive by four men, at 6*l.* per fm.; the lode in this end is looking very promising, present value 16 cwts. of lead and blende ores per fathom. The same level east of shaft by four men, at 7*l.* per fm.; the lode in this end has greatly improved in the last 6 ft. driving, worth 15 cwts. of lead and blende ores per fathom. No. 1 stope in the back of the 20, west of shaft, will produce 16 cwts. of lead and blende ores per fathom; let to two men, at 4*l.* per fathom. No. 2 stope back of same level and west of No. 1 stope will yield 30 cwts. of blende and 3 cwts. of lead ores per fm.; let to two men, at 3*l.* 5s. per fathom. The stope in the back of the 20, east of shaft and west of cross-course on the north lode, will produce 15 cwts. of lead ore per fm.; let to two men on the soft lode, at 1*l.* 7s. 6d. per fm., on the hard lode 3*l.* 10s. per fathom. The stope in the back of same level on the south lode will yield 12 cwts. of lead and blende ores per fm.; let at 3*l.* 10s. per fm., all parties to deliver their stuff to the engine-shaft.

CWMYSTWITH.—Oct. 18: Mitchell's level has been driven west on the new lode 16 fms., of which 14 fms. is through ore ground, worth 1 ton of lead ore per fathom.—Stope in the back of the above mentioned: The east end of this stope has been worked up 5 fms. above the back of the level for 5 fms. in length, and west of this for 5 fms. in length has been worked up 2 fms. above the back of the level, and it is now being stoped by six men. As soon as this is up 5 fms. we can commence a rise in the best spot of ore. The ground stoped, and now in way of stoping, is worth on an average for the 14 fms. in length 1 ton of lead ore per fm.; we have 16 men working west of the cross-cut. Michell's level has been driven east on the new lode 24 fms., of which 12 fms. is in ore-producing ground, and has been stoped 9 ft. above the back of the level, worth on an average for 12 fms. long 12 cwts. of lead ore per fathom. In the cross-cut north in Gill's upper level, from Henry Taylor's lode, we have six good men in this, and calculate to drive 4½ fms. per month. We have a communication on Henry Taylor's lode from Gill's lower to Gill's upper level, consequently we have sufficient air to enable us form a communication with Michell's level.

DE BROKE.—T. Hodge and Son, Oct. 20: In the 25 west end at Wilson's we are not yet through the lode, but as far as seen the lode shows a very good appearance, yielding some very good stones of ore. Other places without change worthy of notice. We sampled 10 tons of lead on Monday last.

DENBIGHSHIRE CONSOLIDATED.—J. Pryor, Oct. 21: Since my report for the meeting there is no particular change to notice, with the exception that the lode in the 112 east is 2ft. wide, with a very favourable appearance.

DEVON GREAT CONSOLS.—Oct. 22: There is nothing new in the report from the mines this week; the aggregate value of the different workings amounts to 50 tons, or 225*l.* per fathom.

DUBBY SYKE.—W. Tallentire, Oct. 15: The men at Shooting-box level have been engaged this week making the level higher; it was little more than 5 ft. high where the strong east and west vein crosses the level. At the place where the turn will be open on the vein, both east and west, it is so very unsound above, also requiring 14 or 15 ft. to turn both ways, that it will be too wide to be supported by timber. I think, therefore, it will be most expedient to go back from the vein about 3 fms., and drive across the corner to the vein in the limestone, and leave a pillar to support the unsound ground above. We have repaired the rise this week, which goes from the Shooting-box level to the surface. We also intend to begin to open out Dubby Syke level eastward to try the vein beyond where the "old man" has been.

DYLIFFE.—E. Rogers, Oct. 20: There has been no alteration in any of our different points of operation during the past week; 80 tons of lead ore have been sold to-day to Messrs. Sheldon, Bush, and P. S. Co., at 15*l.* 0s. 6d. per ton, which realised 1202*l.*

EAST WHEAL BASSET.—Richard Pryor, Edward Adams, Oct. 20: Friday last being our pay and setting day, the following bargains were set:—To rise and stope the back of the 50, at the flat-rod shaft, by six men, at 3*l.* 15s. per fathom; lode worth 25*l.* per fathom for copper. The 30 fm. level cross-cut to drive south of this shaft, by four men, at 7*l.* 10s. per fathom; we think we are very near the lode at this point.

EAST WHEAL GRENVILLE.—E. Hosking, W. Bennetts, Oct. 16: There is no change to notice since our setting report.

EAST WHEAL GRENVILLE.—E. Hosking, W. Bennetts, Oct. 21: The lode in the stope below the 120, west of engine-shaft, is worth 5*l.* per fathom. The 120 cross-cut north is without change. The stope above the 110, east of cross-course, is worth 6*l.* per fathom. The lode in the 75 west, on the caunter, is 1 ft. wide, producing a little copper ore and mundic. The lode in the rise above the 45, east of cross-cut, is 18 in. wide, yielding some good copper ore. The lode in the 25, east of cross-cut, is 18 in. wide, producing a little copper ore and mundic.

GAWTON COPPER.—George Rowe, George Rowe, jun., Oct. 16: The lode in the 117, east of King's engine-shaft, is 5 ft. wide, producing peach, spar, and mundic, impregnated with good-quality yellow copper ore. The lode in the side and back of the 117 is 9 ft. wide, yielding mundic and ore to the value of 10*l.* per fathom. The winze sinking below the 105 is worth 10*l.* per fathom. The stopes in the back of the 95, east of winze, is worth 20*l.* per fathom. The stopes in the back of the same level, west of said winze, is worth 8*l.* per fathom. The winze sinking below the 95 is worth 6*l.* per fathom. The lode in the 82 east is 6 ft. wide, showing a very kindly appearance, and producing good stones of ore. The stopes in the bottom of the 82 is worth 6*l.* per fathom. The lode in the rise in the back of the 70 is worth 10*l.* per fathom.

GLASGOW CARADON.—William Taylor, William J. Taylor, Oct. 19: In the 78 east we have good stones of ore, and the lode lets out more water; this end is just now getting under where the lode becomes productive in the level over; this is on the north lode. We have six men driving a cross-cut south at this level to cut the south lode, on which a winze is sunk in the bottom of the midway to within 3 fms. of this level, and we expect we have about 3 or 4 fms. to drive to cut that lode here, which is a very important point. The 78 west is worth 10*l.* per fathom. The middle level west is worth 5*l.* per fathom. This level east, on the south part, is worth 10*l.* per fathom; the lode here is disordered and split, but we expect it to improve again soon. This level west, on south lode, is worth 15*l.* per fathom, in very favourable ground. The 65 east, on south lode, produces a little ore, but not of much value. This level east, on north part, is worth 8*l.* per fathom. A winze in bottom of the midway, down within 3 fathoms of the 78 north, is worth 18*l.* per fathom, ground easy. The stopes and pitches throughout the mine continue to look very well, varying in value from 10*l.* to 25*l.* per fathom. We are getting on with cutting down new shaft as fast as the nature of the work will admit, also preparing pumpwork, rod, &c., to take up the surface water.

GLYN.—Jas. Roach, Oct. 21: The machinery continues to work well, and the shaft is being deepened as fast as possible; the strata passing through is very congenial for the production of lead, which is traversed by branches of lime-spar, containing strong spots of lead ore. The winze under the shallow adit level became inundated through a sudden flow of water from the bottom of it. We are now preparing to deepen this, and I believe we shall soon strike lead in large quantities.

GORSEDD AND MERLLYN CONSOLS.—Wm. Edwards, Oct. 21: New Discovery: I am pleased to inform you that our new point is likely to be a most valuable thing for this mine, and we now have a full complement of men to enable us to explore it as rapidly as possible. The vein, as far as seen at present, is 18 in. wide, containing good lead ore all through, and by Saturday we hope to have ready a small parcel of ore. The men have had to blast a great deal of ground away around the top of the sump in order to make room to put on tackle to raise the stuff therefrom; also they have had to repair the Waen shaft, put in ladders, and lay down rails from the pit to the sump. All is now down, and they commenced to draw this afternoon.

GREAT RETALLACK.—John Harris, Oct. 16: Setting Report: The 40 to drive east, by four men, at 4*l.* per fm., the month; the leader part of the lode is about 4 ft. wide, worth about 1 ton of blende per fathom, with a most promising appearance for further improving: and also three pitches on tribute to six men, at 37s. 6d. per ton of best blende each; the men to pay all cost to make it marketable. I am pleased to say the whim-shaft was communicated with Stephen's underlie shaft yesterday, and the men will be engaged for a week or so in erecting horse-whim, shaft tackle, &c., with some other necessary work, before resuming operations on ground again.

GREAT RETALLACK.—John Harris, Oct. 21: There is no change in the 40 end east to report from what I wrote you on Saturday last. Our other men—the shaftmen—are busily engaged in erecting horse-whim, shaft tackle, &c., which I hope will be completed by Saturday next.

GREAT WEST VAN.—T. Hodge, Oct. 21: All the bargains below ground are progressing favourably, and without any change worthy of notice since my last. I examined the eastern part of the mine at surface yesterday, and we shall place a pare of men to open on the Wye Valley lode at once.

GREEN HURTH.—Wm. Vipond, Oct. 15: No. 1 Cross Vein: The cross-cut east from the end of this continues very hard. We still have some small strings crossing this with some ore in them, producing saving work; beds still dipping. The rise to surface from end above is now in clean plate, and not yielding any ore.—Stope No. 1 below Adit: We continue getting good ore from the sides in this, but another month will clear this out up to the rise at the end.—Stope No. 2 below Adit: This continues about as it has been for a long time; very good ore in it.—Stope No. 1 above Adit: We have still a fine rib of ore in this; it is worth 4 tons of ore per fathom. No. 3 cross vein is unchanged, the men having been taking up the hazle in the bottom part, which is not productive, the ore being in the limestone at the top. No ore this week in the old vein east, and the ground harder. We have miserable weather for outside work.

HINGSTON DOWN CONSOLS.—James Richards, Oct. 21: Bailey's shaft is in regular course of sinking below the 150 fm. level, in which 18 inches of the lode is being carried, consisting of quartz, caple, mundic, and both tin and copper ores.—Bailey's Shaft: In the 150 fm. level west the lode where being stripped west of communication, is still 4 ft. wide, and worth fully 7 tons of ore or 21*l.* per fm. The lode in the two stopes in the back of the 150 fm. level west, is worth on an average 8 tons of ore, or 24*l.* per fm. In the two stopes in the bottom of the 140 fm. level west, and west of Allen's winze, the lode is worth on an average 8 tons of ore, or 30*l.* per fm. We continue to drive the 140 fm. level west, by the side of the lode, in which the ground continuing hard, progress is slow. The lode in the two stopes in the bottom of the 120 fm. level west is worth on an average 6 tons of ore, or 15*l.* per fm. In the 120 fm. level west, the lode is fully 5 ft. wide, composed of caple, peach, mundic, and quartz, and produces occasionally good stones of both copper and tin ores. The lode in the stope in the back of the 110 fm. level west, and west of Kitt's rise, is worth 4 tons ore, or 12*l.* per fm.

ILLOGAN.—R. Pryor, Oct. 20: No noteworthy change has taken place throughout this mine during the past week.

LADYWELL.—A. Waters, Oct. 21: The lode in the 30, south of engine-shaft, is 3 ft. wide, composed of spar, &c., but there is yet no ore in it to value. No. 1 winze, below the 16 south of shaft, continues to go down in a sparry lode, with stones of ore in it. No. 1 stope in the 16 south is worth about 15*l.* per fathom. No. 2 stope, south of ditto, is at present in a wide loose lode, yielding solid lumps of ore. No. 3 stope, in bottom of said level, is yielding good orestuff. The stope in adit, south of No. 1 winze, is worth 20*l.* per fathom. No. 2 stope, south of ditto, is worth 15*l.* per fathom. No. 3 stope is at present soft open ground, yielding large lumps of ore. The two stopes north of shaft are worth together 25*l.* per fathom. We have to-day sampled 25 tons lead ore for sale next week.

MEDLYN MOOR.—J. Rowe, Oct. 19: Engine Shaft, South Lode: We are driving east and west of the cross-cut on this lode; it is not quite so large as when we cut it in the cross-cut, the ground being a little harder. In each end it is 10 in. wide, producing good work for tin. We are paying 3*l.* 5s. per fathom for driving each end. The lode through which we are driving will work at 10s. in 1*l.* when it is properly opened for tribute or stoping. This is good profitable ground. We have cut through the lode in the north cross-cut; it produces stamping work for 8 ft. wide. Here the best part is about 5 ft. wide. We are driving east and west on it, carrying the level 4½ ft. wide. The lode is worth in each end 12*l.* per fathom. We pay 4*l.* 10s. per fathom for driving each end. In about a month from this time we shall put men to stope the lode, and shall be able to rise a good quantity of tinstuff at a moderate cost. We have resumed the driving of the north cross-cut towards the other lodes, one of which is, so far as we can judge, only about 5 fathoms before us. We ought to intersect it in a month. We shall resume the south cross-cut also when the ends are a little more advanced. The lode from which we raised 4 tons of tin cannot be more than 4 fathoms before us. We must resume the sinking of the engine-shaft very soon, for if the lode in the north cross-cut continues its underlay we shall have it in the engine-shaft in sinking 5 fathoms deeper. We have suspended the south lode at the flat-rod shaft, the water on this lode having considerably increased. We shall clear more of the east adit, with a view of taking up more water into it. When we want to resume the workings on this lode again, we can attach the flat-rods to the engine, and in two days draw out the water. We have put the men that worked here to drive the cross-cut north at the engine-shaft. We have six men clearing the west adit, and hope in a month or six weeks to finish clearing this west adit. We have met with some difficult chokes, occasioned by crushes of the ground. We are stamping night and day with six heads, and hope to put three more to work next week. The work stamped is looking tolerably well. On the whole, our prospects are very cheering.

MONYDD GORDDU.—R. Rowse, Oct. 20: In a few days we shall finish the lodge at Burnett's 12 fms. below the adit, when sinking from thence for a 24 fm. level will be commenced by nine men. We are pushing on the 12 cross cut as fast as possible towards the main lode, and seeing we have such a fine lode in the winze overhead, I feel confident of getting a good course of lead before reaching the north wall. In the drift over adit, east of Pickett's, we continue to get good lead, and open up profitable ground; about this point we shall have much valuable stuff for the dressing-floors. Steady progress is being made in opening the mine, and our prospects for a paying property maintained. The rough weather is against our surface work, but we are progressing favourably under the circumstances, and have began to send leadstuff down the incline for the crusher and dressing machinery. The 14-ft. wheel for working the jiggers, round buddles, &c., with the other necessary appliances for making the lead marketable is on the mine, and another three weeks with anything like reasonable weather will enable us to set them in motion, and quickly get a parcel of lead for the smelters. The fitting of one thing and another I find takes a good bit of time, but we are bringing matters to a close.

NEW CHIVERTON.—J. Trewartha, Oct. 21: Setting Report: The 35 to drive north by two men, the month, at 5*l.* 10s. per fm.; lode at present not to value, but according to indications a good improvement will quickly take place. The 35 to drive south by six men, the month, at 8*l.* per fm.; lode worth 6*l.* per fathom. To rise above the back of the 35 south by two men, the month, at 6*l.* per fm.; lode worth 8*l.* per fathom. A winze to sink below the 25 by four men, the month, at 5*l.* per fm.; lode worth 5*l.* per fathom. The 25 to drive south by four men, the month, at 6*l.* per fm.; the lode is worth 4*l.* per fathom. The 25 north is suspended, and the men taken therefrom to sink the winze above mentioned. Four tribute pitches in back of the 35 north to eight men, varying in tribute from 9*l.* to 10*l.* per ton, and respectively worth 12*l.*, 10*l.*, 9*l.*, and 7*l.* per fathom. One tribute pitch in back of the 35 south by two men, at 10*l.* per ton; lode worth 8*l.* per fathom. One tribute pitch in back of the 15 by two men, at 10*l.* per ton; lode worth 6*l.* per fm. Good progress is being made in sinking the engine-shaft, which is now 6 fms. below the 35.

NEW CONSOLS.—R. Pryor and Son, T. Jenkin, Oct. 20: There is no particular change to notice either at surface or underground since last report.

NEW HENDRA.—R. King, Oct. 11: The lode in the deep adit end for the last two or three fathoms has been rather disordered by a hard cross bar of ground, but I consider we are pretty near through it. The ground and lode appear to be changing for the better. The lode again produces some good stones of copper ore.

— Richard King, Oct. 18: The lode in the deep adit end for the last 2 or 3 fms. has been rather disordered by a hard cross-bar of ground, but I consider we are pretty near through it. The ground and lode appear to be changing for the better, and the lode again produces some good stones of copper ore.

NEW ROSEWARNE.—E. Hosking, W. Bennetts, Oct. 21: In the 67, west of Pool's shaft, the men are still cross-cutting through the lode, which is producing some copper ore and blende. The rise above the 67, west of Pool's shaft, is worth 5*l.* per fathom. The lode in the 58, west of Pool's shaft, is large, but not looking so well for copper ore. The lode in the winze below the 58 west is worth 10*l.* per fathom.

NORTH POOL.—W. C. Vivian, F. Clymo, Oct. 21: The ground is becoming easier for progress. In our driving upon the lode the rock is also presenting a more congenial appearance. I feel confident that ultimately we shall be rewarded for our perseverance in this part of the mine.

NORTH TRESKERBY.—R. Pryor, Oct. 19: The lode in the shallow adit level, west of Doctor's shaft, is improved, and is now worth 15*l.* per fathom for copper. The stopes and other tutwork bargains throughout the mine are also somewhat improved.

OLD BOTTLE HILL.—R. Unsworth, Oct. 19: There is no alteration to notice. The tributers will, from present appearances, earn fair wages.

OLD TINCROFT CONSOLS.—James Pope, Oct. 20: In the 30, west of Diamond shaft, the lode is worth for tin, 6*l.* per fathom. In the 10 west the lode is worth for tin, 10*l.* per fathom. The engine-house is completed, and the engineers will commence putting the engine together at once.

OLD TREBURGETT.—W. Hancock, W. T. Bryant, Oct. 20: The 90 and 80 ends south of shaft are much the same as to value as when reported on last week. In the 70 south the lode is worth about 25*l.* per fathom. In No. 3 winze below this level we are cutting through the western part of the lode; when this is done we intend sinking it on with a full pare of men, but have a good deal of water to contend with. The stopes are much the same. We sampled to-day a parcel of silver lead ore, computed 34 tons, for sale on the 28th instant.

PARYS MOUNTAIN.—T. Mitchell, October 21: We have no change calling for any remark since my last report, excepting the 65 west which is looking a little better and yielding good patches of copper ore.

PATELEY BRIDGE.—C. Williams, Oct. 20: I have no alteration to report this week in any department. Satisfactory progress is being made throughout the mine. In the 20 cross-cut west we have gone through a continuous course of lead ore 53 ft. in length, and in the end the vein is as productive as ever, yielding upon an average about 2 tons of ore per fathom. Pumping, drawing, dressing, &c., are going on regularly. Machinery in good working order. I shall send you a full report next week.

PEDN-AN-DREA UNITED.—W. Tregay, Wm. Prideaux, J. Pope, Oct. 16: Sump: The lode in the 160 west end is still branchy, producing tin in some of the branches worth about 6*l.* per fathom. In the 150 west end the lode (Martin's) is worth 10*l.* per fathom. In the 140 west end the lode (Martin's) is worth 12*l.* per fathom. In the 120 fm. level west end we have been obliged to take the men from here in order to complete some timbering in the 110; the lode is, therefore, unchanged, but little having been done here.—Cardozo's: In the 100 west end the lode (north) is worth 15*l.* per fathom. In the 90 west end the lode (north) is worth 5*l.* per fathom. In the 90 west winze the lode (north) is worth 15*l.* per fathom. In the 80 west end the lode (north) is worth 16*l.* per fathom. In the 70 west end the lode (north) is worth 25*l.* per fathom. In the 60 west end the lode (north) is worth 15*l.* per fathom. In the 55 west end the lode (north) is worth 8*l.* per fathom. In the 47 fm. level west end the lode (north) is worth 6*l.* per fathom. Critchley's 50 to 90: In cutting down and timbering we are making fair progress, but the ground still requires heavy timbering. In the 140 rise we are making rapid progress. In the 90 cross-cut nothing of any importance has been intersected here since last report. In the 47 east the ground is still mixed up with branches, and disordered by the cross-course. In the 47 west the lode in the end, although it has produced rich stones of tin, has not presented any settled appearance, although the ground seems clear of the influence of the cross-course, consequently we doubt whether we have the right lode, and think it prudent to continue the cross-cut a little further south to prove the point. In the cross-cut we have stones of tin (mixed up with the cross-course) of the richest description. We sold on Tuesday arsenic computed at 25 tons to the Cornwall Arsenic Company, at 6*l.* 5s. per ton; also, computed, 4 tons to the Falmouth Chemical Company, at 3*l.* 10s. per ton.

PENNERLEY.—W. T. Harris, J. Delbridge, Oct. 20: Engine-Shaft: The 130, driving west, is at present yielding no lead to value, but the prospects are a little more encouraging for ore. The lode in the 120 is producing occasional stones of lead ore, and fair progress is being made. The 100, on east and west lode, is for the present suspended, and we have placed the men to drive west on the Warm Water lode, which is 1½ ft. wide, of a promising appearance. The lode in the winze sinking below the 70, on Warm Water lode, is 3 ft. wide, worth 2½ tons of lead ore per fathom. The stope from this winze is worth 3 tons of lead per fm. The lode in the winze sinking below the 60 is producing 1 ton of lead ore per fm.; this being in whole ground is very likely to improve, and open up fresh ground for stoping. The lode in the winze sinking below the 20 is worth 1½ ton of lead per fathom. We have commenced a cross-cut in this level, east of Bland's shaft, to prove a branch gone off in the side, and expect to intersect it in about 3 fms. driving, and if found rich will be a source of help to our returns.—Potter's Pit: We have commenced sinking the shaft below the 75, and shall get it down with all dispatch; the ground is favourable for progress. This (the 75) level driving west, although at present not yielding sufficient lead to to value, is producing some good stones of ore, and very encouraging—to all appearance just entering a good run of lead ore. Good progress is being made, and the grownd easier than last reported. In the 65, No. 1 winze is down 4 fms., and the lode is worth 1 ton of lead per fm. In No. 2 winze the lode is worth 3 tons, and in No. 3 winze 4 tons of lead per fm. The stopes throughout the mine are yielding lead about the same as for some time past.

PENSTRUTHAL CONSOLS.—W. Teague, Oct. 21: In Highburrow shaft, sinking under the 46 fm. level, the lode during the last 6 ft. sinking has not been so productive as last reported on, owing to a small patch of elvan coming in contact with same; but I believe this only to be temporary, and that shortly it will be found to be equally valuable as formerly—namely, 25*l.* per fathom. In the 46, driving east of Highburrow shaft, on the south or copper part, the lode has not improved as I anticipated. It really showed as if we were nearing a bunch of copper ore, and during the last month's driving very rich stones of copper ore were found; the lode is still of a most promising character for the production of that mineral. We set on Saturday last the cross-cut to drive north at the 46, east of Highburrow shaft, to cut the tin lode I believe to be in that direction, which will be reached in about 9 ft. driving, and will be effected during the present month. In the 46 driving west of Highburrow shaft, the lode is very kindly in appearance, and worth for tin 10*l.* per fathom. In the 34, driving east of Highburrow shaft, the lode is worth for tin 10*l.* per fathom. In the 34, driving west of shaft, the lode is worth for tin 7*l.* per fathom. In the 22, driving west of footway shaft, the lode is worth for tin 5*l.* per fathom. The sinking of the middle shaft is being pushed on with all speed, and fair progress is being made. The late continuous rains have much retarded our progress in the driving of the cross-cut north from the western shaft, and, in fact, have caused us to cease operations altogether for the present, and we have put the men to sink a winze in the bottom of the 10, west of footway shaft; but so soon as the water will admit of our resuming the driving of the cross-cut we shall at once do so. We shall sell our usual quantity of tin ore on Saturday next (5 tons). Everything on the mine is going on satisfactorily.

PORT NIGEL.—J. Manley, Oct. 20: The engine-shaft will be down by the end of this week the required depth below the 56 for bearers and cistern, when we shall commence other preparatory work for fixing the new pit work. I have set the 56 to drive east, by six men, at 6*l.* 5s. per fathom; lode is large, its component parts being principally gossan, quartz, and good lumps of lead and blende ores, with large feeders of water bubbling up from the bottom of the level, which I consider a good feature for the production of mineral. A rise over the back and about 2 fms. behind the end by the same men, at 6*l.* 10s. per fathom; we have a good rib of lead ore on the west end of this rise from 7 to 8 in. wide, and I am looking forward to an early improvement here. The 56 to drive west by four men, at 8*l.* 15s. per fathom; lode worth 12*l.* per fathom. The winze below the 44 by six men, at 10*l.* 10s. per fm.; worth 20*l.* per fathom; we shall communicate this with the rise in about a fortnight, which will ventilate the bottom of the mine and give a good section of stoping ground. The 44 to drive east, by two men, at 4*l.* per fathom, worth 10*l.* per fathom; we have driven through a run of ore ground here for about 28 fathoms in length, the bottom of the level varying in value from 8*l.* to 20*l.* per fathom, which argues well for the 56. The old stope over the 44, by two men, at 3*l.* per fathom, worth 10*l.* per fathom. The stope over the 44, west of Powell's rise, by two men, at 3*l.* 5s. per fathom. No. 1 stope, east of the said rise, to drive by four men, at 3*l.* 2s. 6d. per fathom. No. 2 stope to drive east, by four men, at 3*l.* 2s. 6d. per fathom; these stopes are at the present time worth in the aggregate 42*l.* per fathom. The rise over the 34 by two men, at 6*l.* per fathom. We are pushing on with our surface improvements, and dressing for another sampling as fast as the weather will permit.

PRINCE OF WALES.—J. Andrews, J. Pryor, Oct. 20: There is not much change in the 77 and 55 ends since last report; the lode in each end is about 1 ft. wide, composed principally of quartz, capel, and spots of ore.

RELISTIAN CONSOLS.—John Curtis, Oct. 21: The engine is now almost ready to work, and we hope to commence next week to drain the mine. We are securing the adit shafts in the various lodes.

RHEIDOL.—J. Ridge, Oct. 16: The 30 west continues to improve, yielding good saving work for dressing for the width of the lode, with every appearance for improving. The 10 west has fallen off in value this week; a joint came in on the north side, which has thrown the lode a little to the south, but I expect it will improve in a few feet more, as it is turning back to-day, and yields nice bunches of ore.

ROMAN GRAVELS.—A. Waters, Oct. 21: The 95, north and south of shaft and cross-cut, are worth together 7 tons per fathom. The 80 north is in a lode 6 ft. wide, carbonate of lime and stones of lead, of a promising character. The 80, south of Corfield's, is worth 6 tons per fathom. The 65, south of Stokes' winze, is worth 3 tons per fathom. Stopes generally as for some time past. The floods of rain have given the pumping-engine more work than usual, but a few dry days will put us right again.

ROSEWALL HILL AND RANSOM UNITED.—Wm. Bugelhole, J. White, Oct. 21: Goole Pellas, Middle Lode: The lode in the new flat-rod shaft, sinking below the 25, is presenting a more favourable appearance than at any time since we have met with the junction of Goole Pellas lode, and is now 18 in. wide, and worth 18*l.* per fathom. The 35, driving west, is still in tin ground; lode 2 ft. wide, and worth 10*l.* per fathom. The 35, driving east, is improved since our last report; lode now 2½ ft. wide, and worth 10*l.* per fathom. In the 25 east we have a change in the ground, and the lode is carrying a branch of capels, which contains good work for tin, worth 5*l.* per fathom. The 25 west is now passing through a hard bar of ground, which has somewhat disordered the lode, but as there is another run of tin ground ahead of this level, we are inclined to think that the falling off in this end is only temporary.—North Lode: The 25, driving west of the cross-cut, is gradually improving as we are extending it further west; the lode is now worth 6*l.* per fathom, and very easy ground. There is also a larger quantity of water flowing from this lode.—North Carbona: The lode in this carbona, in the back of the 100, is now 2¼ ft. wide, and worth 20*l.* per fathom; and Nos. 2 and 3 crossings are worth 10*l.* per fathom. The lode in the 100, west of the north carbona, is still looking very kindly in the bottom of the level, worth 25*l.* per fathom. The ground above this lode still leads us to hope that we shall shortly meet with a good deposit of tin.

ST. AGNES CONSOLS.—William Vivian, Oct. 21: In the 72, driving east of south cross-cut, the lode is 3 ft. wide, producing some good tinstone. In the same level, driving west, the lode is 2 ft. wide, producing tin and copper ores. In the 72, driving east of north cross-cut, the lode is 3 ft. wide, producing about 1 ton of copper ore per fathom. In the 84 cross cut, driving south of engine-shaft, there is no change to notice since last week. We hope to have the whim-engine at work in the early part of next week.

SOUTH CARN BREA.—Wm. Rich, James Knotwell, Oct. 19: The lode in the 164 end west has a very promising appearance, and carries a little copper. The ground is a little easier for driving than it has been. The rise in the back of this level will yield 1 ton of copper ore per fathom. The lode in the engine-shaft sinking below the 164 yields good stones of ore. The ground is easier for driving the 164 end east, and we are looking forward to an improvement in this end very shortly. The stope in the back of the 150 east is worth 15*l.* per fathom.

SOUTH CONDURROW.—Wm. Rich, Wm. Williams, Oct. 20: We have begun a rise in the back of the 93, near the cross-course, to prove the lode and for ventilation. The lode is worth 12*l.* per fathom. The lode in the winze, in the 60 west, is worth 30*l.* per fathom. We will send you a full report next week for the meeting.

SOUTH DARREN.—John Boundy, W. H. Boundy, Oct. 18: Setting Report: The 90, to drive west, by six men, at 13*l.* 10s. per fathom; the lode at this point is very wide, and never looked better than now; it is composed of a dark clay-slate, copper and lead ores, worth 40*l.* per fathom. To stope the back over the 90, west of shaft, by four men, at 85s. per fathom; the lode is 3 ft. wide, worth 13*l.* per fathom. To stope the back over the 90 west, from ditto, by four men, at 85s. per fathom; the lode is 3 ft. wide, worth 16*l.* per fathom. To stope the back over the 80 west, from the shaft, by four men, at 80s. per fathom; the lode is 2½ feet wide, worth 12*l.* per fathom. To stope the back over the 80 west, from the winze, by four men, at 80s. per fathom; the lode is 3 ft. wide, worth 14*l.* per fathom. The 70, to drive west, by six men, at 12*l.* per fathom; the lode here is looking better since the date of our last report, and from the present appearance of the lode a further improvement may be expected soon; the present value is 10*l.* per fathom for lead and copper ores. To stope the back over the 70 east, from the winze, by four men, at 85s. per fathom; the lode is 2½ ft. wide, worth 11*l.* per fathom. To stope the back over the 70 west, from the winze, by four men; the lode is 2 ft. wide, worth 12*l.* per fathom. To stope the back over the 70 west, by two men, at 80s. per fathom; the lode is 2½ ft. wide, worth 9*l.* per fathom. Drawing and dressing are being pushed on as fast as possible for another parcel of lead ore.

SOUTH GREAT WORK.—Samuel J. Reed, Oct. 21: In the flat-rod shaft, below the 45, the Orchard lode has considerably improved, now worth 10*l.* per fathom. In my last I noticed a desirable change in the character of the lode, which has been gradually improving, and I think we may shortly expect still better results. A winze has been commenced west of the shaft, at the 45, where the lode is large, and worth 12*l.* per fathom. The lode in the 35 east is 4 ft. wide, and worth 7*l.* per fathom. There is a favourable change in the 25 east, which end is in advance of any other. There is nothing new to report further. We are preparing a parcel of tin at the calcining house.

SOUTH ROMAN GRAVELS.—John W. P. Powning, Oct. 20: We have had a steady downpour of rain for three days in succession, which has increased the water in the mine to 15 strokes per minute. It is not safe to run the pitwork at a faster rate, consequently we find it very difficult to sink shaft.

SOUTH TOLCARNE.—J. Vivian and Son, J. Paull, Oct. 21: In the 40 fm. level cross cut we have not yet intersected any part of the lode. In the 30, east of cross-cut, the lode is 5 ft. wide, of a very favourable composition and appearance while producing rich specimens of black and grey copper ores. In the 30, west of cross-cut, the lode is 3½ ft. wide, also of good composition and appearance, and yielding black and grey copper ores.

SOUTH WARD.—R. Goldsworthy, Oct. 20: No change to notice since my last report. We shall in a few days commence to take down the lode in the 72 south, and when completed I will advise you as to its size and character.

TANKERVILLE.—A. Waters, Oct. 21: Everything connected with the underground department here goes on regularly, and the different points looking as for some time past. Surface work has been retarded by the almost continuous rain for some days past, but we shall get through this in a short time.

TEESDALE.—T. Watson, Oct. 15: Holmes' Level, North End: The men have got the rise at this place to top full size; the next step will be putting timber into the rise, so that we may commence to work the vein each way from the rise.—Hopkin's Level: This level is now into strong ground, vein strong and promising. I think the level will now stand without arching, which will save much expense, and the level will be driven faster.—Dressing-Floor and Surface Work: The weather has been very much against our outdoor work this week.

TRELEIGH WOOD.—E. Hosking, W. Goldsworthy, Oct. 20: The shaftmen are making good progress in sinking the engine-shaft below the 44, and we expect to get it to the 56 some time next week, when we shall commence at once to drive north to cut the lode. There is no change to notice in any of the bargains. The stopes are yielding good quality tinstuff. Friday next will be setting day, when we will send a full report.

TREVARRACK.—James Pope, Oct. 20: In the 85, west of engine-shaft, the lode is 1 ft. wide, composed of peach, mundic, and spar, with stones of tin. In the 74 west the lode is 2 ft. wide, composed of peach, mundic, prian, and soft spar, with stones of tin throughout, and the stratum is very much improved in appearance, from which an early improvement may be expecten.

TYLLWYD.—J. Paull, Oct. 21: There is no material change here since our last report. No alteration has taken place in the 20; the lode is 2 ft. wide, carrying clay-slate, nice spar, and lead ore, but not enough to value. The cross-cut is being pushed out south in the 30 as fast as possible. The western end of the stope on the south-west lode has fallen off in value a little, but the eastern end has improved, consequently it is much the same as last week. We have had very rough and wet weather for our surface work during the last week, but it is much better now. All our machinery is going well, and dressing going on regularly. Although the 20 west is not at the present moment looking so well as it has been, still, from all appearances, it will soon resume its former character and produce, and when the cross-cut north of the 20 is driven to cut the south-west lode, and get under the ore we are now stoping, and the south lode cut in the 30, it will very materially enhance the value of the property.

VAN CONSOLS.—J. Roach, Oct. 21: The 40 fm. level east of main shaft is driven on north part of lode 7 fms. from cross-cut; no material alteration in its composition since my last advice. That part of lode carried in sinking under the 25, in line with Murray's shaft, is principally barytes; but this is contracting, and the lode soute of it presents blende and cubes of lead stronger than usual. As this is deepened, the rich winze 14 fms. west of it is being drained; therefore, I think we shall soon pass through the barytes, and meet with lead extending from shaft to winze. In the rise above the 35, against Murray's shaft, we continue to make the usual progress. No alteration in surface operations. With this I send you sketch of Murray's shaft, and the productive winzes under 25 fm. level.

VRON.—S. Harper, Oct. 16: There is no change in the character of the rock or lode in sinking the engine-shaft below the 40 yard level; by reason of so much rain the water is very much stronger here. The lode in the roof of the 80 yard level, west or No. 2 winze, is 2¼ ft. wide, composed of clay, spar, and lead ore, worth 10 to 15 cwts. per fathom of the latter, a very nice looking lode. The lode in the winze sinking below the 80 yard level is 1 ft. wide, clay and soft spar, intermixed with lead ore. We are deep enough to meet the main part of the run of ore gone down to the west of this winze. We are opening a small level north of the trial shaft, taking about 3 or 4 feet of the rock, meeting with nice cross joints of spar and clay, but I am not yet satisfied as to its being the lode. The ground we are opening being favourable we shall continue on a little further. All surface operations as usual.

WEST CRAVEN MOOR.—D. Williams, Oct. 20: Blackhill Level: The vein or lode in the forebreast of this level is of the same width as when last advised upon, composed of quartz and limespar, intermixed with spots of lead ore; the ground is spare for driving. We have laid rails and sleepers on surface, and have removed the tip further west, in order to have room for a new dressing-floor, &c.—East Shaft: This shaft is being pushed down with all possible dispatch to the required depth—20 fms. below surface; the vein or lode is without any change to notice.—West Shaft: Good progress has been made in this bargain during the last fortnight with six men, and we have only 6 yards more to sink to reach the rich course of ore in the drivage below. We have completed the office, and are getting on with the metal house, clearing, and repairing the dressing-floors, as well as the draining and wrenching south of Blackhill level.

WEST GODOLPHIN.—John Pope, Oct. 16: Setting Report: Wilson's Lode: The 60 pitch east to drive by six men, at 7l. per fathom; width of the lode 6 ft., worth 40l. per fathom. The 60 pitch west, to drive by four men, at 3l. per fm.; width of lode 4 ft., worth 15l. per fathom. The 50 pitch east to drive by six men, at 5l. per fathom; width of lode 3 ft., worth 12l. per fm. The 40 west to drive by two men, at 2l. 15s. per fathom; width of lode 1 ft. 6 in., worth 2l. 10s. per fathom. The 40 east to drive by two men, at 4l. per fathom; width of lode 2 ft., worth 3l. per fathom. The 40 stope east to stope by six men, at 2l. 10s. per fathom; width of lode 4 ft., worth 10l. per fathom. The 30 fm. level winze east to sink by two men, at 2l. per fathom; width of lode 3 ft., worth 5l. per fm. The 20 east to drive by two men, at 4l. 10s. per fm.: width of lode, 2 ft., worth 3l. per fm. The 10 east to drive by four men, at 2l. 10s. per fathom; width of the lode 1 ft. 6 in. The deep adit east to drive by two men, at 3l. 5s. per fathom. Boulton's shaft east to sink by nine men, at 5l. per fathom.—Caunter Lode: 60 fm. level south, to drive by two men, not set. Tribute: 60 fm stope south, to stope by four men, at 10s. in 1l., width of lode 3 ft., worth 8l.; ditto by two men at 10s. in 1l., width of lode, 2 ft., worth 8l.; 50 fm. stope north, by three men, at 10s. in 1l., width of lode 3 ft., worth 9l.; 40 fm. stope south, to stope by two men, at 10s. in 1l., width of lode 2 ft, worth 8l. Pink: 50 fm. stope east, to stope by four men at 10s. in 1l., width of lode, 1 ft., worth 10l.; ditto, by two men at 10s. in 1l., width of lode 1 ft., worth 8l.; 40 fm. stope east, to stope by one man at 10s. in 1l., width of lode 1 ft., worth 8l. Laying down tramways by four men, day work, not sett. We to-day sold 11 tons 14 cwts. black tin, at 51l. 7s. 6d. per ton=601l. 1s. 6d., and have sampled 5 tons of rich copper ore.

WEST GREAT WORK.—Samuel J. Reed, Oct. 21: Since my last communication to you more of the lode has been taken down in the 10, west of Duke's shaft, which, from the assays I have made, is worth fully 12l. per fathom. This is going into a piece of unexplored ground to the surface, and within a short distance of the well-known Pearce's bunch of tin, where one of the West Godolphin lodes forms a junction with it. The prospects have not been so good since operations have been commenced in this part of the mine as at present.

WEST MARIA AND FORTESCUE CONSOLS.—Wm. Skewis, Oct. 21: The rise in back of the 93, east of Willesford's shaft, is worth 12l. per fm.; this rise will lay open some good tribute ground. Tributers are clearing the adit on the Devon Consols lode, and it is believed they will earn good wages in this part of the mine. All the tribute pitches are looking well throughout the mine. We are pushing the erection of more arsenic chambers to the flues with all possible speed.

WEST MILWR.—W. Francis, Oct. 20: The progress in the 70 cross-cut south continues very satisfactory, and the indications are still most encouraging. The measures contain fine compounds of silicious bearing matter. The driving has now been continued about 75 yards from the West Meadow shaft, and I expect to intersect the main east and west vein either during this month or the early part of next.

WEST TANKERVILLE.—A. Waters, Oct. 21: The south boundary shaft, below the 63, is down 6 ft.; the lode is not yet taken down to the full width, but will report on this next week. The 63, south of shaft, is worth 22l. per fathom. The stope in the said level south is worth 15l. per fathom. The winze below the 50 south is worth 30l. per fathom. No. 1 stope, in this level south, is worth 15l. per fathom. No. 2 stope, south of ditto, is also worth 15l. per fathom. No. 3 stope, south of ditto, is worth 25l. per fathom. No. 4 stope is worth 25l. per fathom. The stope in the 40, south of the shaft, is worth for lead and blende 18l. per fathom.—Old Mine: There is no change of note here since last week. The heavy rains have caused the pumping-engine to go faster than usual.

WEST WHEAL GORLAND.—J. Mayne, Oct. 22: The copper lode in the large bottoms is just the same as last reported. We have commenced a rise in the back of the 30 east in whole ground to the surface; it is yielding a little tin. Our object in putting up this rise is to intersect the lode of tin further west that is dipping towards this point. In the cross-cut the ground is still changing, the granite rock not being so hard we think we must be very close to the lode. Our sampling is 14 tons of copper ore, and we hope soon with a further improvement in the lode in the bottoms, and with the drivage of levels east and west, as soon as we are down about 2 fathoms deeper that our samplings will be very considerably increased.

WEST WHEAL TOLGUS.—Oct. 19: Taylor's shaftmen sunk 1 fm. last month, and but for the hindrance with the water coming back from Richards' shaft there would have been 9 or 10 ft. sunk. Now that the dam is fixed in the 75 fm. level we hope to make greater progress in sinking this month, everything seems to bid fair for it. We have suspended the driving of the 125 west until we can get in a stull to carry the air into the end. Richards' shaftmen have taken a contract to sink the shaft to the 85, at 31l. 10s. per fathom, which will be about 8 fms. A pare of men, with the pitman, are being employed in casing down Richards' shaft from the 30 to the 75; the stuff up to this time has been drawn from the 65, through the old or north shaft. In a short time we hope to be able to draw from the 75 with the machine kibble. We are pushing on with the work about the new whim engine as fast as possible, and if the pipes, &c., are brought as promised, we shall be able to try the engine on Monday next. The boiler will be covered and made ready, and we hope the other things will be here. We have now finished sampling another month's ore in four parcels of very good quality; total weight, 220 tons.

WHEAL AGAR.—The cross-cut is now 6 ft. in the lode without any appearance of south wall; rich tin stuff is coming from the end. Lode in shaft sinking below the 187 is improving, daily looking better; nothing new in the 170 cross-cut or in the 150.

WHEAL CREBOR.—J. Andrews, Oct. 20: The lode in the stope in the bottom of the 120, east of winze, has very much improved during the past week, and is now 8 ft. wide, worth 35l. per fathom. The lode in the stope west of winze, in the bottom of the same level, is 5 ft. wide, worth 20l. per fathom. The lode in the 108 east is 7 ft. wide, yielding saving work for copper and mundic, a very promising lode. There is little or no change in the 72 east, lode still large and promising. The lode in the 48 east is 3¼ ft. wide, worth full 30l. per fathom. The lode in the stope in the back of the 48 has improved, and is now 4 ft. wide, worth 20l. per fathom. This is very encouraging, seeing there is no level over, but is whole ground to surface, a distance of 50 fms.

WHEAL CREBOR.—J. Andrews, Oct. 21: The lode in the 48 stope has greatly improved, and is now 4 ft. wide, and worth 35l. per fathom.

WHEAL GILBERT CONSOLS.—James Pope, Oct. 20: In the adit level west of shaft the lode is very much improved—now worth fully 10l. per fm. In the adit cross-cut south nothing has been intersected since my last report, but there is still a large stream of water coming from the ground from which I expect some lode or branch is very near.

WHEAL GRENVILLE.—E. Hosking, Wm. Bennetts, Oct. 16: The lode in the 160, east of cross-cut, is worth 20l. per fathom. The lode in the stope above the 160 east is worth 15l. per fathom. The stope below the 150, west of winze, is worth 14l. per fathom. The lode in the 150, east of cross-cut, is worth 10l. per fathom. The stope above the 150, east of cross-cut, is worth 13l. per fathom. The lode in the 130, east of cross cut, is worth 9l. per fathom. The lode in the 130, east of cross-cut from north shaft, is worth 10l. per fm. The lode in the same level west is worth 9l. per fathom The rise above the 130, east of cross cut from north shaft, is worth 10l. per fathom.—Old Tin Lode: The lode in the north shaft sinking below the 130 is 2 ft. wide, producing a little tin; the ground is favourable, and the men are making fair progress. The lode in the 130, east of north shaft, is worth 5l. per fm.

WHEAL GRENVILLE.—E. Hosking, W. Bennetts, Oct. 21: There is no change to report since ours of Saturday last.

WHEAL KITTY (St. Agnes).—Stephen Davey, Oct. 16: The bargains throughout the mine maintain their value as reported last week, hence we have no especial remark of any change.

WHEAL RUSSELL.—John Bray, Oct. 21: The lode in the 25 is 6 ft. wide, producing a little copper. The lode in stope above this level is worth 14l. per fm. The lode in stope below the 40 is worth 15l. per fathom. There is no other change in the mine to notice since last report. We shall sample for this month 100 tons.

WHEAL UNY.—Wm. Rich, M. Rogers, W. Rich, jun., Oct. 16: The lode in the 160 end, east of engine-shaft, is worth 6l. per fathom. The 160 west is unproductive. The 150 fm. level, west of incline shaft, is worth 12l. per fathom. The 150 fm. level, east of Goodinge's, is poor. The 140, east of King's, is worth 12l. per fathom. The 130, east of King's, is worth 10l. per fathom. The 120 east is worth 7l. per fathom. The 110 east is worth 15l. per fathom. The winze below the 100 east is worth 8l. per fathom. The rise in the 60, west of incline shaft, is worth 7l. per fathom. The rise in the 40 west is worth 5l. per fathom.

STEAM BOILERS.—The invention of Mr. K. W. HEDGES, of Cheapside, consists, firstly, of improvements in the construction of vertical boilers to prevent the great waste of heat where the products of combustion are directly exposed to the part of boiler above the water line. It also relates to an improved manner of getting at furnaces of this kind of boiler for purpose of repairs, and to improvements in the construction of furnaces.

VAN MINING COMPANY—MONTHLY REPORT.

Oct. 20.—Seaham's engine-shaft is down 4 fms. below the 90; set to 15 men, 15 fms. stent, for the sum of 420l. The 90, east of shaft, is extended 6¼ fms.; the lode in the present end is worth 55l. per cubic fathom for lead ore—set to six men, at 250s. per fathom. The same level west is extended 20½ fms. upon the main leader, which is worth for lead ore 90l. per cubic fathom. The appearance of the lode going down in bottom of this level looks very encouraging for the 105; set to six men, at 240s. per fathom. The 75, east of shaft, is suspended for this month, and the men are put to sink a winze for the purpose of ventilating the 90, at a point about 30 fms. east of shaft: set to six men, at 240s. per fm. The 75, west of shaft, driving upon the main leader, is extended 59½ fms.; worth for lead ore in the present end 90l. per cubic fathom: set to six men, at 240s. per fathom. Set to six men to sink a winze below this level, at a point 40 fms. west of shaft, in order to ventilate the 90, at 240s. per fathom. The stripping of the lode to its full width by the side of this level, at a point about 50 fms. west of shaft, is set to eight men, at 80s. per fathom. Also at a point about 30 fms. west of shaft, set to eight men, at 80s. per fathom. A stope in back of the same level, to be called the 20 fm. stope, is set to six men, at 60s. per fathom; the lode at these three points is worth on an average 34l. per cubic fathom. The 60 is extended west of shaft 128 fms. The lode in the end shows nice spots of lead, but not sufficient to value; set to four men, at 110s. per fathom. The cross-cut from the bottom of the 60 winze below this level, is set to six men, at 280s. per fathom. We hope to effect a communication with the 75 in about nine days hence.

The stopes in the back of this level are set as under:—The 115, west of shaft, to eight men, at 70s. per fathom; the 100, west of shaft, to eight men, at 70s. per fathom; the 90, west of shaft, to six men, at 70s. per fathom; the 80, west of shaft, to six men, at 80s. per fathom; the 72, west of shaft, to eight men, at 80s. per fathom; the 64, west of shaft, to eight men, at 80s. per fathom; the 56, west of shaft, to eight men, at 80s. per fathom; the 48, west of shaft, to eight men, at 70s. per fathom; the 40, west of shaft, to eight men, at 70s. per fathom; the 32, west of shaft, to eight men, at 75s. per fathom; the 24, west of shaft, to six men, at 75s. per fathom; the 16, west of shaft, to eight men, at 70s.; the 8, east of shaft, to eight men, at 70s. per fathom; the 16, east of shaft, to eight men, at 70s. per fathom; the 24, east of shaft, to six men, at 70s. per fathom; the 40, east of shaft, to eight men, at 75s. per fathom. These stopes are on an average worth 25l. 10s. per cubic fathom; average width 18 ft. The 45 is set to six men, at 100s. per fathom. This level is now within 2 fms. of getting under Edwards's shaft, and as soon as this has been driven we shall put up a rise to the 30. The present end shows nice spots of lead at times, but not sufficient to value. The 45 permanent level west is set to four men, at 100s. per fathom. The stopes in the back of this level are set as under:—The 92, west of shaft, to eight men, at 70s. per fm.; the 80, west of shaft, to four men, at 70s. per fathom; the 70, west of shaft, to eight men, at 85s. per fathom; the 60, west of shaft, to eight men, at 85s. per fm.; the 54, west of shaft, to six men, at 80s. per fathom; the 44, west of shaft, to four men, at 80s.; the 8, east of shaft, by twelve men, at 80s. per fathom; the 16, east of shaft, to six men, at 75s.; the 24, east of shaft, to four men, at 80s. per fm.; the 40, east of shaft, to six men, at 90s. per fathom; the 54, east of shaft, to eight men, at 90s. per fathom. These stopes are on an average worth 25l. per fathom for lead ore; average width 17 ft. 6 in. The stope in the back of adit, east of shaft, is set to six men, at 72s. 6d. per cubic fathom; worth for lead ore 17l. per fathom, lode 2 fms. wide. We have this month set four men at 100s. per fathom to drive a cross-cut south from the 45, east of shaft, to communicate with permanent level.—Surface: We hope to have the six cottages under roof in about a fortnight hence. Machinery is in good working order. Our four-weekly sale takes place to morrow, upon 500 tons of lead ore and 150 tons of blende.—WM. WILLIAMS.

FOREIGN MINES.

ST. JOHN DEL REY MINING COMPANY (Limited).—Advices received Sept. 29, 1875, ex Mondego (s.), dated Morro Velho, Sept 1:—

MEASUREMENT OF EXCAVATION TAKEN TO-DAY:—	Fms.	ft.	in.
From mark to bottom of sump	11	3	7
From bottom of sump to end of ground east	3	0	0
From bottom of sump to top of first stope west	6	3	0
From top of first stope to top of second stope west	9	4	7
From top of second stope to top of third stope west	4	0	7
From top of third stope to top of fourth stope west	19	3	7
From top of fourth stope to top of fifth stope west	12	5	4
From top of fifth stope to of sixth stope west	8	1	8
Vertically from top of sixth stope to bottom of driving	1	3	0
Width of lode in sump	4	4	0
Vertical sinking for August	1	0	9

GOLD EXTRACTED TO DATE.—The produce extracted during the second division of the month of August, a period of 11 days, amounts to 18,964·8 oits. It has been derived as follows:—

	Oits.	Tons.	Oits. per ton.
From mineral stamped	17,473·0	from 1853 =	9·429
Re-treatment	1,491·8	,, — =	·805
Total	18,964·8	,, 1853 =	10·234

Oits. Ozs. troy. Oits. Ozs. troy per ton.
Or 18,964·8 = 2183·3327 = 10·234 = 1·1778

A considerable quantity of killas having been sent with the mineral from the mine to the spalling-floor accounts for the diminished quantity of gold yielded per ton in this division.

WATER SUPPLY.—This, although diminishing steadily, is still sufficient for the requirements of all the machinery, and is yet more abundant than it was before the launders were replaced.

The health of the establishment is now in a satisfactory state.

Advices received Oct. 18, 1875, per Elbe, dated Morro Velho, Sept. 17:—

GENERAL OPERATIONS.—A very creditable amount of work has been done in all the departments of the establishment, but a diminution in the supply of water, stoppages for repairs, and other causes, have contributed to make the result of our operations less favourable than may have been anticipated,

MINE AND MINING WORKS.—The various operations in the mine department continue to be carried on in a regular and satisfactory manner. The preparations being made at the north wall for the westward driving make slow, but steady, progress. The occasional necessity of withdrawing the men employed there for the purpose of quarrying stone for the supply of the kibbles has somewhat retarded this important work, but I am led to expect that the driving westward will very shortly be resumed.

You will observe from the returns that a supply of stone is being obtained from both shafts more than equal to our present diminished stamping power, and we are, therefore, accumulating a stock on the spalling-floors; it contains, however, a large quantity of quartz and killas, and will not give a large yield per ton.

REDUCTION DEPARMENT.—A very large quantity of stone was stamped, and an equally large quantity of sand was treated during the month of August. The rapid falling off in our water supply is now, however, being seriously felt, and the result of the current month's operations will, undoubtedly, be much less favourable. Every effort will, however, be made by proper distribution and by repairs to our stamps wheels and launders to make the best use of our present available supply.

PRODUCE FOR THE MONTH OF AUGUST.—The amount of gold obtained during the past month is rather less than that produced in July, and from the larger number of heads we have now employed in reducing ore you may have expected a better result. But several causes have united to prevent the realisation of this desired object, and the chief of these were—diminished duty from stopping of the stamping-mills for repairs; and whilst the launders were being replaced or the Cristaes Rego, a decreased yield of gold per ton of stone stamped, and in the third division of the month lessened duty from our insufficient supply of water.

Taking these circumstance into consideration, the result shown will be found satisfactory. The gold extracted for the month of August amounts to 52,515·9 oits., and has been derived as follows:—

	Oits.	Tons.	Oits. per ton.
From mineral stamped	48,132·5	from 5077 =	9·480
Re-treatment	4,383·4	,, — =	·863
Total	52,515·9	,, 5077 =	10·343

6054·229 ozs. Troy. 1·1924 oz.

COST AND PROFIT FOR AUGUST.

The produce being	52,515·9 oits.			
Less loss in melting	247·0 ,,			
	52,268·9 at 7s. 9d. per oit.=	£20,254	4	0
Cost, less sums receivable in reduction of the same		6,776	19	7½
Profit		£13,477	4	4½

The cost in Brazilian currency will be found to be about the same as for the previous month, but, though the produce is rather less in August than it was in July, the profit now advised is 120l. increase, owing to the lower rate of exchange.

GOLD EXTRACTED TO DATE.—The gold extracted during the first division of September, a period of ten days, amounts to 14,301·5 oits. It has been derived as follows:—

	Oits.	Tons.	Oits. per ton.
From mineral stamped	12,798·3	from 1573 =	8·135
Re-treatment	1,503·2	,, — =	·955
Total	14,301·5	,, 1573 =	9·090

Equal to 1648·7302 ozs. troy, or 1·0481 ozs. troy per ton.

The above is a very unsatisfactory result, and is caused by circumstances already referred to, and over which we have little or no control.

The following telegrams have been received:—

Sept. 23.—Produce, 10 days (first division of September), 14,250 oits.; yield, 9·0 oits. per ton; profit for the month (August), 13,400l.

Oct. 6.—Produce, 10 days (second division of September), 15,250 oits.; yield, 8·9 oits. All going on well.

Oct. 11.—Produce for the month (September), 46,000 oits.; yield, 8·8 oits. per ton. Rains have set in. All going on well.

Oct. 18.—Produce, nine days (first division of October), 15,000 oits.—5812l.; yield 8·6 oits. per ton. General work in mine and on surface going on well, and satisfactory duty being accomplished.

DON PEDRO NORTH DEL REY.—Report for August—Produce and Cost: Produce, 497 ozs. troy, at 8s. 6d. per oit., 1765l. 17s. 6d.; cost, 2587l. 19s. 3d.; loss 822l. 1s. 9d.—First Division of September: Produce weighed 1139 oits.; remittance, one month, 3979 oits. bar gold.—Telegram: The following telegram from Rio, Oct. 7, referring to a later date than the above advices, was received on the 8th inst.—"Produce cleaned up (on account of September) 2450 oits. Estimated total for the month (September) 3300 oits.

SANTA BARBARA (Gold).—The directors have received per Elbe the usual monthly advices from their manager, Mr. Hilke, Sept. 12, with result of the working of the mine for the month of August, of which the following is an extract:—A pleasing improvement has taken place in the size of the lode wrought on during the month. At the end it became 9 ft. wide, which width now extends from 5 fms. below No. 1 level down to the adit, and is of good productive quality. The ore crushed during the month amounted to 959 tons, although No. 4 stamps was not fully at work, producing 3·531 oits., or 3·734 oits. per ton. This satisfactory produce is showing a profit on the cost of working the mine of 617l. and 546l., including cost of new works; on the whole, I may say I never saw the mine looking better. On the 9th inst. Mr. Richards took charge of a box of amalgamated gold, containing 6766 oits. for delivery to Messrs. Edward Johnston and Co., of Rio.

RICHMOND CONSOLIDATED.—Cablegram from the mine at Eureka, Nevad—Hall, London: Week's run, $42,000. Stopes looking well,

— R. Rickard, Sept. 28: I am glad to be able to write cheerfully concerning the mine; it has much improved for the past two weeks. The stope between the 500 and 600 is looking well, and the ore is of better grade than it was. The winze sinking below the 600 is also in ore, and looking more promising than it ever has since we began sinking; at first the ground and pitch were irregular, and did not correspond with the other part of the workings, but now it is taking the same direction as the general dip. I took a sample from the bottom of the winze, and it assayed 2·10 ozs. of gold per ton and 11·90 ozs. of silver; the proportion of gold is greater in the bottom workings than it was above. The 700 drift is being pushed on to meet the winze sinking from the 600; the ground at present is rather hard, and, consequently, slow driving. The continuation of the 400 stope, rising towards the 200, of which I spoke of in my last, is not looking quite so well as it did, still there are good indications of finding something in this place. We are rising, and have a regular wall, and some small patches of ore. The 200 cross cut is in hard ground; within the last few feet driven we have met with two veins of ledge matter, which is a good indication. On the west side of the hill we are still stoping—so far cannot find any place where the ore is making down. We shall, nevertheless, sink near the footwall when we get the stope opened to that far. The shaft is down 81 ft. below the 700 ft. level; by the end of next week we shall be deep enough for the 800 ft. level. The three furnaces are doing good work. The ore smelted lately has been very low grade, and the returns have been, consequently, low; it is somewhat better now, and I hope it will continue, so as to increase the outturn. The engine is working very smoothly, and has not worked better since I have been here. The ore for the past few days has been of higher grade in gold, and the bullion is better. The furnaces are working well, and putting through large quantities of ore. Since we have decided to stop two of the apparatus everything seems to go on smoother; by working only two we shall get sufficient litharge for the furnaces, and we shall then be able to test thoroughly the important advantages to be gained by the desilverising, and I shall have more time to attend to things in general, which was impossible when all the refinery was working. The water we have struck in the bottom of the mine is so far of no consequence; I repeat this because I saw in the Eureka *Sentinel* an exaggerated article on the subject. We have got through the pyrites-bearing quartz, and are now in quartzite, and when we came to the division of the two stratifications we found this water; it does not increase, and appears to be only surface; if it should increase, which I do not believe it will, I will inform you of it by cable. There is no change of any consequence in the mine. On the west side of the hill we are going to sink, at one place the ore seems to go down, I shall follow it, and hope it will make down and form another chamber of ore.

PORT PHILLIP AND COLONIAL (Gold).—Telegram, Melbourne, Oct. 16: Month ending Oct. 6—Yield per ton, 5 dwts. 9 grs.; profit, 630l.; remittance, 650l. Commenced No. 11 level.

ALMADA AND TIRITO.—Telegram from Mr. Breach: Ore in Mina Grande twelve and tunnel winze. Promising lode, black ore, Providencia. Furnace working well. Profit for September, $7684. New lode, Providencia, 8 ft. wide, improving.

RIO TINTO.—Telegraphic advices from the committee of directors now visiting the mines report the completion of the arrangements in progress for sending down supplies of ore considerably beyond their present requirements.

JAVALI.—Capt. Sohns (Sept. 5) reports that 30 stamps worked 25 days, crushing 1960 tons of quartz, yielding 610 ozs. of gold, at an average of 6 dwts. 5 grs. The remittance is valued at 1770l.; the expenditure had been 899l. 4s.; leaving a profit of 870l. 16s. In the expenditure 263l. 15s. 6d. is set down to capital account.

FRONTINO AND BOLIVIA.—The directors have pleasure in sending the following important information regarding the mines, received from Mr. R. B. White, although the accounts and reports on the state of the mines are still on their way. It is expected that they may be received by the mail steamer due on the 29th inst., after which a general meeting of the shareholders will be convened:—"Medellin, Aug. 16: Since communication with the coast has been interrupted I have written you two letters, one *via* Buena Ventura, and the other *via* Bogota. The company has $51,800 [this is the produce of May, June, and July] in bar gold safely deposited here, waiting means of transport. We continue to make from $6000 to $7000 per month profit. The mines continue to develope well, and are in a very satisfactory state. Last month's report shows Cecilia rich, Nueva Cecilia rich, Bolivia good, Tigre good, Nemeneme rich, Silencio rich, but doing little, only to keep the water under and driving levels whilst the engine is being put up. This we hope to be able to manage, as all the machinery arrived at Zaragoza safely, and should ere now be arriving at the mines. Mr. Barreneche has received from me all the necessary instructions. You may safely reckon that this month the company will be free from debt here, and have something to its credit.

ANTIOQUIA (Frontino).—The directors have pleasure in sending the following important information, received from Mr. R. B. White, regarding the mines, although the accounts and reports are still on their way. It is expected that they may be received by the mail steamer, due on the 29th inst., after which a general meeting of shareholders will be convened:—"Medellin, Aug. 15: Since communication with the coast has been interrupted I have written you two letters—one *via* Buena Ventura and the other *via* Bogota. The company has $3300 [the produce of May, June, and July] in bullion here. The mines are again in a satisfactory state, after the Escobar's getting through the difficulty caused by the cross-course, which was very serious. The lode was thrown 24 ft., but we have it now in the end of the Zapa, and No. 1 level will get it soon. I took several measures, which are likely to prove successful, to improve the condition of the mines, and expect better returns. The adit level (Carmen Mine) is now clear over a length of 220 fms., and accessible for 227 fms. From trials made there seems to be no doubt that we can get paying mineral from the backs left in the mine. Examinations and explorations are being made of the mineral and of the cross-course question. I am of opinion that we may pick up the true Carmen lode east of the cross-course, which I do not believe has ever been known. As soon as we are into the end of the adit we shall commence cross-cutting to Escobar. The mines are well managed. All the men that can be employed are engaged, and there is no scarcity of labour; and although the Antioquia Company's Mines have met with difficulties, we shall soon see them prospering."

CHONTALES.—Mr. Smeddle, Sept. 5: The quantity of quartz reduced has been 1801 tons, from which we have obtained 270 ounces of gold, being an average of 3 dwts. per ton. A portion of the gold being from the arrastra is of low value. We value the gold obtained at 730l.; total cost for month, 698l.: leaving a profit of 32l. The above cost includes the sum of 45l. charged to construction account.—San Benito Mine: I am sorry to say that this mine does not improve in value as I expected it to do. We are now east of the old cross-cut, directly under where the lode was very payable and upwards of 15 ft. wide. Although we are only 40 ft. deeper the end is at present scarcely 4 ft. wide, and very poor. I think that it will doubtless improve as we advance eastward, the lode in this direction averaging at one part 10 dwts. per ton. On account of a rise in this mine having collapsed in the early part of the month, injuring the ventilation, we have not obtained the quantity of quartz that we otherwise should have done.—San Sebastian: The rise in the south lode, which we intend to put to the surface, is now upwards of 90 ft.; the lode is poor, and I do not expect any improvement until urged further east. As soon as the rise is completed we shall take out some payable blocks on the north lode, and by the time these are worked out I expect the south lode will be opened out and in payable ground.—San Domingo: The ground we have been stoping during the past month has been very poor. I intend for the future to confine the workings to the eastern end, which I believe will give a better result.

San Antonio: During the past month the greater part of the ore obtained has been from the surface over the back of the old stopes. The returns have not equalled my expectations. We are also pushing on the main level eastward, but the ground is at present poor.—Estrella: We have obtained no quartz from this mine during the past month, and are still engaged repairing the cross-cut, which I expect will be completed about the middle of the present month.—Machinery: The weather has been such that we have been unable to do anything at Estrella Raw. Sufficient timber has been delivered for the erection of housing over the battery, which will be commenced in a few days. The wheel-pit has been completed. The health of the establishment is good.

BENSBERG.—C. Craze, Oct. 18: Victoria shaft has been sunk 2 ft. in the last week, the lode here is a little improved, now worth 2 tons of lead ore per fathom, with a very promising appearance for further improvement. The 14, west of shaft, is producing occasional stones of ore, but up to the present not enough to value. The stope in the back of this level has fallen off in the last few days, now producing about 1 ton of ore per fathom. The ground in the 14, east of shaft, is disordered by a crossing with no ore in it at present; however, I think as we get away from its influence a little further east we shall have a valuable lode. We have commenced to sink a winze in the bottom of the level west of new shaft about 14 fms. to the east of this end, where the lode is worth 1½ ton of lead ore per fm.; this winze when holed will ventilate the mine and facilitate our stoping the ore ground about the new shaft. Stuff put to dressing 65 tons, producing 4½ tons of ore of 44 per cent.

MENZENBERG.—R. K. Roskilley, Oct. 20: Dickin's Engine-Shaft: The 45 cross-cut, which is 45½ fms. west of shaft, is being continued in a very fine mineralised channel of ground, and in which during the past day or two we have met with a very promising branch, composed of quartz, containing rich spots of yellow copper ore; altogether the end is presenting a favourable appearance, although the rock at this moment is somewhat faster for progress; this, however, we think to be only temporary, and judging from its present character we believe it will shortly improve. No other change throughout the mine.

LUSITANIAN.—Oct. 2: Palhal: In river shaft, sinking below the 140, the lode has not been taken down in the past week; the stones of ore still continue. The stope below the 160, west of winze 95, is holed to the stope above the 170. In the rise above the 150, against River shaft, the lode is 3 ft. wide, of quartz. In rising above the 170, against winze 99, the lode is composed of quartz. Stoping above the 170, east of winze 75, the lode is worth 2 tons per fathom. In the 110 cross-cut, south of Basto's lode, east of River shaft, the ground is a hard, fine gneiss.—Levels, &c., on Basto's Lode: In the 170, west of Taylor's, the lode is 2½ ft. wide, composed of quartz and a little country. In the 160 west the lode is yielding ½ ton per fathom. The stope above the 70, east of River shaft, is poor. In the 150, east of Taylor's shaft, the lode is 1½ ft. wide, composed of quartz; and in the 150, west of Taylor's, and west of the slide lode, the lode is a mixture of quartz and country. The lode in the 90, east of River shaft, is composed of flookan, schist, and spots of lead. Mill lode, in the 70, east of River shaft, is 1 ft. wide, composed of soft and hard country. The lode in the 70, east of the same (Basto's), is 1½ ft. wide, containing good stones of lead. The lode in the 28 east is 5 feet wide, showing spots of lead. In the 50, west of Taylor's, and west of the slide, the lode is small and unproductive. No change in the cross-cut at Carvalhal.

DEATH OF AN ENGLISH MINING ENGINEER.—Capt. Thos. Faull died in New Almaden, Sept. 3, in the 62d year of his age. He was a native of Cornwall, and came to New Almaden in 1856, taking the position of captain of the mine, for which he had engaged himself for four years. During his engagement he made many practical improvements and changes from the Mexican method of mining. He was re-engaged for two years, and after leaving New Almaden he followed his profession in Idaho, Grass Valley, and Washoe. Some four years ago he returned to New Almaden, where he died of apoplexy.—*San Francisco Stock Report*, Oct. 1.

FUEL ECONOMISERS.—Some improvements in fuel economisers and apparatus for promoting economy in the consumption of fuel in furnaces and for lessening the emission of smoke therefrom have been patented by Mr. S. ELSON, of Blue Pitts, Manchester. The inventor forces air into an economiser—as, for example, into "Elson's economiser"—and conveys the heated air to the bridge of the furnace. He withdraws the internal tubes from the "bottles" of his economiser through openings in the supply pipe when the said tubes require cleaning, and secures together the spiral scraper and the spiral supporting bars by means of bolts.

*** With this week's Journal a SUPPLEMENTAL SHEET is given, which contains—Original Correspondence: Wire Tramways (W. Carrington); Mining in Queensland; Copper Mining on Lake Superior; Silver Mining in Peru (W. T. Rickard); Nevada Mines; Richmond Consolidated Mining Company; Rock Drills—Progress in the Sutro Tunnel; Andre's "Mining Engineering" (G. G. Andre); Coal Mining—Rock Drilling; Coal Mining in Scotland; Mineralogical Society of Great Britain and Ireland (J. H. Collins); Central Swedish Iron and Steel Company; West of England Fire-Clay, Bitumen, and Chemical Company; Cornish Mining—its Evils, and their Remedies; Gwennap Mining District (R. Symons); Mining in Cornwall; Visit to West Maria and Fortescue Mines; "Scipio," and the Pennerley Mine; West Chiverton, and "Circular Mining" (G. Sharp); Dowsing and Divining (T. Dineen); Philosophy of the Divining Rod.—Silver Mines of Santa Eulalia, Mexico—Patent Matters—Meetings of the Trebeigh Consols, Killaloe Slate, Wicklow Copper, Denbighshire Consolidated, Battle Mountain, Clifton Silver, New Rosario, and Wheal Basset and Grylls Companies.

The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, OCT. 22, 1875.

COPPER.	£	s.	d.	£	s.	d.
Best selected...p. ton	91	0	0–	92	0	0
Tough cake and tile.	89	0	0–	90	0	0
Sheathing & sheets...	95	0	0–	96	0	0
Bolts	97	0	0–	98	0	0
Bottoms	98	0	0–	99	0	0
Old	80	0	0–	—		
Australian, Wallaroo	92	10	0–	93	10	0
ditto other brands	89	10	0–	90	0	0
Chili bars, g.o.b.	82	10	0–	83	10	0
Wire ...per lb.	0	0	11¾–	—		
Tubes	0	1	0¼–	—		
BRASS.				per lb.		
Sheets				9d.–10d.		
Wire				9¼d.–	—	
Tubes				9¼d.–11¾d.		
Yellow metal sheathing				7⅞d.–8¼d.		
Sheets				7⅞d.–	—	
SPELTER.				per ton.		
Foreign on the spot..	24	15	0–25	0	0	
„ to arrive ...	25	0	0–	—		
ZINC.						
In sheets	31	10	0–	—		
TIN.						
English blocks ... £	89	0	0–	—		
Do., bars (in brls.)	90	0	0–	—		
Do., refined	92	0	0–	—		
Banca	91	0	0–	—		
Straits	85	10	0–	86	0	0
Australian	82	10	0–	83	10	0
TIN-PLATES.*				per box.		
IC Charcoal, 1st qua.† £	1	10	0–	1	11	0
IX Do., 1st quality ...	1	16	0–	1	17	0
IC Do., 2d quality ...	1	5	0–	1	8	0
IX Do., 2d quality ...	1	11	0–	1	14	0
IC Coke	1	1	0–	1	3	0
IX Ditto	1	7	0–	1	9	0
Canada plates, p. ton..	14	10	0–15	0	0	
Ditto, at works	14	0	0–15	0	0	

IRON. per ton.	£	s.	d.	£	s.	d.
Bars Welsh, in London	7	15	0–	8	0	0
Do., to arrive	7	17	6–	8	0	0
Nail rods	8	5	0–	9	10	0
„ Staffd. in London..	8	15	0–	9	10	0
Bars „ ditto ...	9	7	6–	9	10	0
Hoops „ ditto ...10		5	0–10	10	0	
Bars „ at works ...	8	10	0–	9	5	0
Hoops „ ditto ...	9	5	0–11	0	0	
Sheets, single, & plates	11	0	0–12	10	0	
Pig No. 1, in Wales ...	5	0	0–	6	10	0
Refined metal, ditto ...	7	0	0–	8	0	0
Bars, common, ditto...	7	0	0–	7	10	0
Do., merchant, f.o.b. in Tyne or Tees...	7	10	0–	7	15	0
Do., railway, in Wales..	6	5	0–	7	0	0
Do., Swed. in London.	14	10	0–15	0	0	
To arrive	14	10	0–	—		
Pig, No. 1, in Clyde ...	3	3	0–	3	8	0
Do., f.o.b. Tyne or Tees	2	15	0–	3	0	0
Do., Nos. 3, 4, f.o.b., do.	2	13	0–	2	15	0
Railway chairs	4	0	0–	4	10	0
„ spikes	12	0	0–13	0	0	
Swedish boiler plates..25		0	0–35	0	0	
„ sheets & strips	28	0	0–29	0	0	
STEEL.				per ton.		
Swed., in kegs (rolled)	—		—	—		
Ditto (hammered)	19	0	0–	—		
Ditto, in faggots	20	0	0–	—		
English, spring	18	0	0–22	0	0	
LEAD.				per ton.		
English Pig, com.	22	15	0–23	0	0	
Ditto, L.B.	23	0	0–	—		
Ditto, W.B.	24	0	0–	—		
Ditto, sheet	24	10	0–	—		
Ditto, red lead	25	0	0–	—		
Ditto, white	30	0	0–32	0	0	
Ditto, patent shot	22	10	0–27	0	0	
Spanish	22	7	6–22	10	0	
QUICKSILVER (p. bot.)	13	0	0–13	10	0	

* At the works, 1s. to 1s. 6d. per ton less. † Add 6s. for each X.

Terne-plates 2s. per box below tin-plates of similar brand.

REMARKS.—The position of the Metal Trade remains unaltered. Values are maintained in the face of continued depression, by reducing production, somewhat in proportion to the lessened demand. The quietude which has been for so long a time the distinguishing feature of the trade remains as marked as ever, and it is most probable as regards metals generally that this will continue for some time to come. The disturbed condition lately assumed by the money market does not tend to allay the lack of confidence in the future which has delayed the period when a restoration to a condition of normal activity might be looked for. The inconvenience resulting therefrom is wide-spread and trade generally is in a measure crippled thereby. Bank rate was raised on the 21st inst. to 4 per cent., and as this is caused mainly by the withdrawal of gold, and not by demand for money for mercantile purposes, this action also tends to discourage the development of trade. Should the shipments of gold continue to any large amount, which it is supposed may be the case, a further rise in Bank rate will become inevitable, and so soon as a limit beyond the accepted standard rate of 5 per cent. has been reached commerce will become more seriously contracted thereby.

COPPER.—The market has been steady throughout the week, and Chili bars have maintained their value, business on a limited scale having been done at 82*l.* to 82*l.* 10s. for g.o.b., usual cash terms, but until Thursday last the market lacked animation. The announcement, however, of the charters from the West Coast during the first half of October to the effect that they did not exceed 1400 tons, of which 900 tons were allotted to England and 500 tons to the Continent, has caused a revival in the demand, and a considerable business has resulted in bars up to about 83*l.* for g.o.b., usual cash. Wallaroo is quoted 92*l.* to 92*l.* 10s.; Burra, 90*l.*; English tough, 89*l.*; best selected, 90*l.*; strong sheets, 96*l.*; and India, 4 by 4, 95*l.*; yellow metal, 7⅞ to 8¼.

IRON.—The support which the market has obtained for a considerable period, more especially in the North of England, from the demand for pig-iron for shipment abroad and coastwise, is gradually being withdrawn, and as the shipping season draws to a close will become still more limited. In connection with this limitation in demand for pig-iron several of the large works in the North are reducing their establishments, and it is far from improbable that this reduction is but premonitory of the closing altogether of some of them, and thus the consumption of pig-iron will become materially reduced, and the tendency of the market will be to lower quotations. As these probabilities assume definiteness buyers are increasingly indisposed to commit themselves beyond the actual necessities of the moment, in the expectation that lower prices may rule before long. The various establishments for the manufacture of finished iron, and prominently among them those engaged in the rail and shipbuilding trades, find that orders are very hard to obtain, and as these departments go to form the staple of the trade in the North of England it is a matter of serious significance when it is found necessary either to reduce establishments or to close works. Quotations for pig-iron are as follow:—No. 1, 58s.; No. 3, 53s.; No. 4 forge, 49s. Rails are quoted 6*l.* 15s. to 7*l.* per ton according to section.

There is no new feature in the position of the South Wales trade. We have already entered upon the last quarter of the year, and it is most improbable that any important change can occur until the usually busy season after turn of the year takes place; but, meanwhile, it does not appear probable that any materially lower rate for iron will be established, inasmuch as in proportion to the falling off in demand the production is being lessened; and, with existing rates of wages and prices given for the raw material, a reduction in the price of finished iron is said to be an impracticability. Should a further reduction in the rate of wages which is now under consideration, be carried out, the masters might deem it politic to offer certain inducements to buyers; but the general impression seems to be that even under a revised rate of wages the reduction would not be sufficiently great to admit of any diminution in price to an extent which should prove an inducement to buyers to come into the market. The published exports of iron from the three ports of South Wales during last month are as follows:—Cardiff, 9963 tons; Newport, 8589 tons; and Swansea, 206 tons, which exhibits a lamentable falling off. The Scotch pig-iron market opened firm this week, and transactions were reported at 61s. to 60s. 9d. Tuesday's market was steady, and values remained very much unaltered.

On Wednesday there was no change to report in value, but a fair business at current rates continued to be transacted. Indeed, a disposition has become apparent during the week to deal in warrants much more freely than for some time past, it being considered improbable that prices will drop much, if anything, below current quotations. To-day the market has been steady, and business is reported at 60s. 6d., cash, and 60s. 9d. one month.

SHIPMENTS.

Week ending Oct. 17, 1874	Tons 10,140
Week ending Oct. 16, 1875	9,723
Decrease	417
Total increase for 1875	Tons 88,682

LEAD.—There is not much doing in this metal at the moment, and quotations are hardly so firmly held as of late. Good soft English pig is obtainable at 22*l.* 15s. to 23*l.*; and soft Spanish, without silver, is quoted 22*l.* 7s. 6d.

SPELTER.—Transactions have been more frequent in this metal than of late. Silesian, P.H. brand, have been sold to arrive at 26*l.* Ordinary Silesian on the spot has realised 24*l.* 15s. Good brands for forward delivery have changed hands at 25*l.*; and English hard is not easily procurable under 20*l.* 10s.

ZINC.—A sale of 135 tons, London rolled, has been effected at 29*l.* to 29*l.* 2s. 6d.

QUICKSILVER.—At the beginning of the week a limited business was done in this metal at 14*l.* 10s., since which 13*l.* 10s. has been accepted; and the future price remains doubtful, as the market closes weak.

TIN.—During the earlier part of the week this market was steady at previous quotations, but without very much doing; but on Wednesday a good demand sprang up, and Straits changed hands at 85*l.* 10s. cash, and 84*l.* 10s. to 84*l.* for delivery in December. Australian has ruled 82*l.* 10s. to 83*l.* A small parcel of Straits is reported to have been sold at 86*l.*

TIN-PLATES.—A considerable demand has sprung up during the week, and it appears that for the present many makers are supplied with a sufficiency of orders, but not at such prices as would induce them to book forward contracts, and buyers are indisposed to advance their limits.

At the Truro Ticketing, on Thursday, 2225 tons of copper ore were sold, realising 11,396*l.* 5s. 0d. The particulars of the sale were—Average standard, 115*l.* 1s.; average produce, 6⅛; average price per ton, 5*l.* 2s. 6d.; quantity of fine copper, 152 tons 4 cwts. The following are the particulars:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
Sept. 2...	1526	£117 9 0	6½	£5 1 6	15s. 3d.	£76 2 6
Oct. 7...	1483	115 11 0	6¼	5 0 6	14 9	73 14 0
„ 21...	2225	115 1 0	6⅛	5 2 6	15 0	74 17 6

Compared with the last sale, the decline has been in the standard 1*l.*, and in the price per ton of ore about 1s. 5d.

THE IRON TRADE (Griffiths's Weekly Report).—Friday Evening. The Glasgow market has been steady for Scotch pigs this week, with little variation. The operations at the Exchange have established a fall of 1s. per ton in g.m.b. iron. The closing price this afternoon is 60s. 6d. buyers, the closing price last week was 61s. 6d. This being the first week in the new quarter (as usual) the business on our market has been within the narrowest limits for most kinds of iron. The meeting of the merchants and manufacturers at the Birmingham Quarter-day being so very recent at which the orders were given out to meet present necessities very little new business has turned up on account of merchants this week. The shipping orders for the northern ports are now very nearly completed. Nothing new in demand is likely to come into the market from this class of shippers. The Middlesborough houses continue to force the finished iron on this market at reduced rates. The Belgian manufacturers are pursuing the same course. We believe the makers of sheet iron in Staffordshire continue moderately well off for orders, and the price of Yorkshire, Staffordshire, and Shropshire iron continues firm, and with the orders taken at Quarter-day we hear the works are tolerably well employed. At Warrington all the works are in full operation; the great works belonging to the Pearson and Knowles Coal and Iron Company received large orders for hoop-iron at Quarter-day for shipment to a European port. This firm, as usual, are working full time. The wire-drawers of Warrington are all actively engaged; we hear Messrs. Rylands are well in for orders for their famous specialites. We have no change to notice in the tin-plate trade. The makers, as a rule, in face of the cost of black plate and tin are reducing the make of plates. We quote makers No. 1 iron as follows:—Gartsherrie, 70s.; Coltness, 75s.; Calder, 74s.; Langloan, 74s.; Summerlee, 66s.; Monkland, 64s. f.o.b. Glasgow; Glengarnock, 68s. 6d.; Eglinton, 63s. 6d. f.o.b. Ardrossan; Shotts, 73s. f.o.b. Leith; Kenniel, 64s. f.o.b. Bo'ness.

Messrs. Vivian, Younger, and Bond—COPPER: In absence of the usual Chili cablegram, due on Monday last, the market has been quiet throughout the week, with a few sales of bars at 82*l.* 5s. to 82*l.* 10s. News is to hand to-day of charters for the first half of the current month, representing 1400 tons, all bars and ingots (900 tons for the Continent), which taken together with charters for the previous fortnight of 1500 tons, is a good deal under the monthly average. The market closed firmer, with sales of bars at 82*l.* 10s. to 83*l.* Furnace material is scarce at 17s. per unit. English in fair demand for tough and best, but orders for manufactured have not been so plentiful lately.—TIN: The market has been steady, with a fair business in Australian at 82s. 6d. to 83s., but chiefly at the former figure. Straits, 85s. 6d. to 86s. spot, and 85s. to 85s. 6d. September-October shipments. Englishs till rather neglected. The market closes steadily at quotations.—TIN PLATES steady.

Messrs. Grenfell and Rickards *(Correction)*—TIN: By an unfortunate transposition of dates in making our extract for last week's Journal from the Circular of this firm, we made it appear that the export of tin had *decreased*, whereas Messrs. Grenfell and Rickards showed that it had *increased*. The corrected extract will read: It is more than probable that at the end of this year the total stocks will show a decided diminution when compared with June 30; if so, higher values may be expected in 1876 than during this year. The delivery of foreign out of warehouse, London and Holland, was:—Jan. 1 to Sept. 30, 1875, 16,250 tons; ditto, 1874, 12,550 tons; ditto, 1873, 10,140 tons The stock of tin here and in Holland, on Oct. 1, was:—1875, 9820 tons; ditto, 1874, 8520 tons; ditto, 1873, 8250 tons. The quantity of tin exported from the United Kingdom, as shown by Board of Trade returns, was:—

	1875.	1874.	1873.
English Tons	4256	6196	4310
Foreign	3228	1844	1026
Total	7484	8040	5336

The demand for English is slack.

Messrs. Harrington, Horan, and Co. (Liverpool)—Arrivals here during the fortnight of West Coast, S. A., produce: Galicia, from Valparaiso, 648 tons bars, and 5 tons Barilla; Anne Main, from Valparaiso, 50 tons bars.—At Swansea: Ioia, from Pena Blanca, 809 tons regulus. Stocks of copper (Chilian and Bolivian) in first and second hands, likely to be available, we estimate at:—

	Ores.	Regulus.	Bars.	Ingots.	Barilla.
Liverpool	—	—	9,626	428	—
Swansea	—	979	2,016	—	—
Total	—	979	11,642	428	—

representing about 12,510 tons fine copper, against 13,206 tons Sept. 30; 14,200 tons, Oct. 15, 1874; 21,800 tons Oct. 15, 1873; 21,000 tons Oct. 15, 1872. Stock of Chili copper in Havre, 2290 tons fine. Stock of Chili copper afloat and chartered to date, 13,600 tons fine. Stock of foreign copper in London, chiefly Australian, 7706 tons fine. According to the Board of Trade returns the total imports and exports into and from this country for the first nine months of the following years, were—

IMPORTS.	1873.	1874.	1875.
Copper in ores Tons	5,838	5,487	6,087
Ditto, regulus	9,533	9,513	11,420
Bars, cake, and ingots	24,277	29,730	31,420
In pyrites, estimated	10,434	10,250	10,698
Total	50,082	54,980	59,625
EXPORTS.			
English copper—wrought and unwrought Tons	17,861	16,419	16,704
Foreign copper—unwrought	15,910	18,282	11,196
Yellow metal	8,407	10,577	10,418
Total Tons	42,178	45,278	38,318

Messrs. French and Smith—QUICKSILVER is quoted 14*l.*, but small lots in second hands are offered at 10s less.

Messrs. Sanford and Bird.—Copper is without change. Tin keeps very steady, with buyers of Australian tin at 82*l.* 10s., and of Straits at 85*l.* 10s. Sellers at 83*l.* and 86*l.* respectively. Tin-plates maintain the recent improvement, and are firmer in price. We quote good cokes 23s. to 23s. 6d. London; second-class brands, 22s. 6d.; charcoals, 26s. to 27s. Lead is somewhat easier in price. Sheet zinc is in fair demand.

Messrs. James and Shakspeare—COPPER: Furnace material is unaltered, and a difference of about 3d. per unit between importers and smelters prevents business. Bars have been rather dull, and at one moment to 82*l.* per ton for good ordinary brands, both for spot and short arrival. At this figure, however, a fair demand sprang up, and we since note a recovery of 10s. to 20s. per ton, with but little disposition to sell even at that advance. The Chili charters were advised yesterday morning as 1400 tons, all bars, of which only 500 are for England, the remainder being for France. The price at Valparaiso on 17th inst. leaves no margin for profit when compared with the rates obtainable here. Australian sorts are steady, and the outside brands, owing to their relative cheapness as compared with Wallaroo and Burra, are being gradually absorbed for home consumption. English maintains late values, and except in Birmingham, where some second-hand parcels are offering, it is difficult to purchase tough or select, except at a very trifling reduction from the top quotations.

TIN.—English is quiet, but smelters will only make a slight concession from the official rates, as given in our list. Foreign sorts are in good demand, and prices have an upward tendency. The trade here is entirely confined to Australian and Straits; the former attracting most attention owing to its moderate value, and large sales have been daily made therein at 82s. 6d. to 83s. cash, whilst forward deliveries realised 82s. 6d. per cwt. The present imports of Australian are of a finer and more uniform character than the first parcels which came to this country, and many lots, recently to hand, are fully equal to fine Straits. Smelters on the other side of the world begin to recognise the necessity of sending a proper and suitable article, and they now turn out really pure stuff, cast into the required shape. Should they continue to exercise the same care, and ship to England only fine slab tin, there is every reason to believe that Australian produce will, ere long, command the same price as Penang metal.—LEAD shows a decline of about 5s. per ton, and the close of the shipping season to Russia is throwing a few lots on the market, which rather accelerate the downward movement.

Mr. Murrant.—TIN: Some doubt having been expressed as to the accuracy of the statistics published in last week's impression, the writer will be happy to have any error pointed out. They make an excess of tin in this country this year of about 8200 tons against the corresponding period of 1874, and about 7000 tons against that for 1873. For the purposes of comparison, at least, these figures are correct.—Straits: During the last day or two sellers have been gradually lowering their prices for forward delivery, but up to the present time buyers have come forward pretty freely. This is owing to the strong opinion that higher rates must rule before the end of the year, which is still held by the majority of operators. Australian has scarcely been so well inquired for as Straits, speculation being mainly confined to the latter description. The week's transactions were about 150 tons Straits and 200 tons Australian, at 82s. to 86s. for cash and forward delivery.—COPPER: Chili: The cable telegram due on the 17th inst., with charters from the West Coast, had not arrived up to Wednesday night, but it was generally understood they were under 2000 tons; they were wired yesterday as 1400 tons. Considerable irregularity has been lately noticeable in the arrival of this cablegram, but on enquiry at Messrs. Reuters' offices no explanation was given respecting it. One or two isolated lots of bars were sold as low as 82*l.*, but on Wednesday the importers refused to accept firm bids of 82*l.* 5s. for g.o.b.'s, and there were strong buyers here at about 83*l.* An upward movement would create no surprise, as much firmness has been imparted to this market by the recent operations in Australian, resulting in the withdrawal of a heavy line, which was not long since being rather pressed for sale than otherwise. The gentlemen connected with the latter operation being of high standing, and practically unlimited means, we may be sure the stuff has not passed into weak hands. In bars great reluctance has lately been shown to enter into contracts for forward delivery, and it is supposed the bears have had enough of it for the present. Furnace stuff is firmly held, and better prices are expected. The business reported consisted of 650 tons g.o.b.'s and named brands, at 82*l.* to 83*l.* for cash, and one three months' contract was passed at 83*l.* for g.o.b.'s. Lota was sold at 82*l.* 15s. for arrival. Market closing firm.

Messrs. Henry Rogers, Sons, and Co.—COPPER: The West Coast Charters for the first fortnight of October were cabled to day as 1400 tons, making 3000 tons for the four weeks ending 15th October. Freights were too high to admit of the shipment of ore. Price on the coast was unchanged, and is now equal to 83*l.*, to sell here. There is a fair demand for English copper, and in manufactured and yellow metal of special brands there is a good deal more doing to the East. Bars found buyers to-day at 82*l.* 10s. to 83*l.* for good brands.—TIN: The market is very firm at 83*l.* for Australian, and 86*l.* for Straits, with a trifle off for deferred delivery.—SPELTER is in more demand, and prices a shade firmer.

Considering the agitated state of the public mind in regard to Turkish and other foreign loans, the MINING SHARE MARKET has been active this week, and some large purchases have been made for investment as well as for speculation. Hitherto British mines, the true state and prospects of which can be ascertained in a few hours, and at any time for a few guineas, have been pretty well ignored by the Stock Exchange. They never offered any great means or margins for mere gambling purposes, while foreign loans and foreign mines offered both; and through them the public now suffer to the extent of many millions of money, while several good mines have been going on paying their 10 and 15 per cent., and rising in value; and to such as these, and to good progressive mines, we think more attention than ever will now be directed. The market has been pretty well weeded of late, and there are good opportunities for getting into sound mines of all classes—dividend, progressive, and speculative. Those most in demand this week have been Roman Gravels, Tankerville, Great Laxey, Pateley Bridge, Wheal Crebor, Parys Mountain, West Seton, Dolcoath, West Tankerville, Pennerley, Old Treburgett, Marke Valley, Carn Brea, South Condurrow, West Chiverton, and a few others.

The tin mines have been better, and Carn Brea leaves off 57¼ to 60; Dolcoath, 47 to 48; Tincroft, 25 to 27; Cook's Kitchen, 8 to 8½; West Frances, 9 to 9¼. Roman Gravels, 12¼ to 12⅝; the lode in the 90, north and south of Old shaft cross-cut, are worth together 7 tons of lead ore per fathom; the 80, south of Corfield, 6 tons. Tankerville, 10½ to 11. West Tankerville, 25s. to 30s.; the 63, south of shaft, is worth 22*l.* per fathom; the stope in this level south is worth 15*l.*; winze below the 50 south worth 30*l.*; the stopes are worth in the aggregate, 98*l.* per fathom. Bog, 6s. to 8s.; the various bargains and pitches are yielding good quantities of blende, and promising for lead; the sampling this week is 40 tons of lead and 100 tons of blende.

Wheal Crebor, 3 to 3½; the lode in the 48 ends is worth 30*l.* per fathom. A stope in the back of this level, and in whole ground to surface, is worth 35*l.* per fathom. The 108 is coming into ore. In the bottom of the 120 east the lode is worth 25*l.* per fathom, in the stope west of winze 20*l.* per fathom. East Pool shares have advanced to 15, 15½; there is an improvement, we hear, in the 160, and a dividend is expected at the next meeting. Unity Wood shares have been in good demand up to 20s., 25s., but few sellers to be found. South Ward, 17s. 6d. to 22s. 6d.; the lode in the 72 will be taken down next week, when a good discovery is likely to be made. Hingston Down, 17s. 6d. to 22s. 6d.; the sale on Thursday realised, with carriage, 854*l.* 2s. 6d. The half-yearly meeting will be held next month, when a good balance will be carried forward, and a dividend of 1s. per share may probably be recommended. Bedford United, 20s. to 25s.; the copper ore sold on the 21st realised the sum of 1046*l.* 5s. The mine is looking well, and here also a dividend is anticipated at the general meeting.

Wheal Agar, 20s. to 30s.; at the meeting the accounts showed a debit balance of 4214*l.* 0s. 9d., and a call of 10s. per share was made. It is believed that the East Pool lode has been intersected, but it will take some little time to prove it; some good stones of tin are being brought to surface from the 180 cross-cut and the shaft. Ladywell, 2⅜ to 2⅝; the lode in the 25 south is 3 ft. wide, but poor. The stopes in the aggregate are worth 85*l.* per fathom. The sampling this week is 25 tons. of lead ore.

Pateley Bridge, 6¼ to 6⅜; no particular change in this mine since our last; the 20 cross-cut west has gone through a continuous course of ore, 53 ft. in length, and the vein in the east end yields 2 tons of lead per fathom. Devon Great Consols, 3 to 3¼; no change here. Great Wheal Vor, ¾ to 1; the lode in this shaft is looking well, and improving as they sink; the 70 and 40 levels maintain their value. East Caradon, 2 to 2¼. Great Laxey, 16 to 16¼. Marke Valley, 2⅞ to 3⅛. Old Treburgett, ¼ to ⅜; mine improved. Cargolls have advanced in Cornwall to 35s. 40s.; at the meeting the accounts showed a balance against the mine of 161*l.*, and a call of 3s. per share was made: 4 tons of silver lead ore have been sold, realising 32*l.* 8s. 6d. per ton. Parys Mountain have been largely dealt in at 11s. 6d. to 12s. 6d.; Pennerley, 25s. to 30s. Penstruthal, 10s. to 12s. 6d.; Plynlimmon, 7s. 6d. to 10s.; Prince of Wales, 3s. to 5s.; Providence Mines, 3 to 4.; St. Patrick, 20s. to 25s. Bampfylde, 15s. to 20s.; Cathedral, 25s. to 27s. 6d.; Monydd Gorddu, 6 to 6½.; Tyllwyd, £20s. to 22s. 6d.; South Caradon, 130 to 150; South Condurrow, 6 to 6½; South Frances, 8 to 10; Van, 28 to 30; Van Consols, 1⅜ to 2; West Basset, 6 to 6½; West Chiverton, 16½ to 17½. West Maria and Fortescue, 5s. to 7s. West Seton, 90 to 100; full details of a very satisfactory meeting of shareholders held in Cornwall, on Thursday, will be found in another column. West Tolgus, 55 to 57½; Wheal Grenville, 2¼ to 2½. Wheal Kitty (St. Agnes), 3 to 3¼. Wheal Uny, 2¼ to 3½. Relistian Consols, ⅝ to ¾.

Chontales, 10s. to 12s.; the advices show a return for the month of 270 ozs. of gold, valued at 730*l.*, at a cost of 698*l.*, leaving a profit of 32*l.* This return would have been greater but for a slight collapse in one of the levels at San Benito. Javali, 11s. to 13s.; the remittance here is valued at 1770*l.*; the expenditure, 899*l.*; profit, 870*l.* 16s. In the expenditure 226*l.* 15s. 6d. is charged to capital account. Eberhardt and Aurora, 8¼ to 8½; Emma, 1½ to 1⅝; Richmond, 9 to 9¼; Sweetland Creek, 2½ to 3. Santa Barbara, 15s. to 20s.; advices have been received per Elbe, dated Sept. 12, and the stone stamped during August was 959 tons: produce, 3581 oits. of gold. This produce shows a profit on working cost of 617*l.* for the month. A box containing 6766 oits. of gold has been forwarded to the agents at Rio.

The Market for Mine Shares on the Stock Exchange during the week has been generally firmer, a considerable amount of business taking place at improving quotations. Home descriptions continue to be principally represented by the more prominent lead mines; there has been a firm market in this department at full prices.

Van, Roman Gravels, Pateley Bridge, Tankerville, West Chiverton, and a few others absorb chief attention. Van shares have changed hands at 28 to 29; the usual monthly report appears in another column. The mine is looking exceedingly well. The 90 west still maintains its value, and other parts of the workings are without change. The sale on Thursday, 500 tons lead and 100 tons of blende, the produce of the last four weeks, realised 824*l.* 10s. Pateley Bridge, 6¼ to 6⅜; in the 20 cross-cut west the driving has been through a continuous course of ore for the last 9 fms., worth 2 tons per fathoms, and the forebreast is a productive as ever; in the eastern cross-cut, from the 20, the agent considers there are less than 5 fathoms to reach Fielding's vein, which yielded very large quantities of ore in the level above, and is known to have gone down rich. In the south-west cross-cut the ground is hard, and letting out a considerable quantity of water; the limestone is spotted with ore and spar, and the agent is of opinion that the Sun vein is very near, which has yielded immense quantities of ore. Sinking is continuing in the Gulf vein, and a depth has now been reached of 6 fms. below the 10 fm. level; the vein is worth 25 cwts. of ore per cubic fathom; the "sink" is 6 ft. by 4 ft., leaving ore on all sides. In Pringap vein the lode continues of the average, and is spotted with ore, and looks (the agent states) like coming into discoveries daily. Satisfactory progress is being made in the works throughout the mine, and the dressing is proceeding regularly.

Silver Mines have been less active, with prices irregularly maintained. Richmond Consolidated in the early part of the week were firm at 9½ to 9⅝, but declined to 9⅜ to 9⅝ upon the cablegram announcement of the week's run—$42,000—which was regarded as disappointing; the cablegram added, "stopes looking well." The make of bullion for the season is $1,033,000, and since February $1,255,000. The refinery this season has produced gold and silver to the value of $715,000, irrespective of the lead. The reports from the mine record continued improvements, the lode appearing to have resumed a steady size and dip. The gold is increasing relatively to the silver, the last assay taken from the bottom of the mine giving 2·10 ozs. gold and 11·90 ozs. silver, equal to $58·80 per ton, and 18 per cent. in lead. The main hoisting shaft is reported now to be in quartzite ore, carrying but little metal—this was the experience

in the Eureka Consolidated, where good quartz ore was met with below the quartzite. At the junction between the quartz and quartzite some water was met with, but the manager considered it to be only "seepage," and as he stated three weeks since that he would cable if any increase occurred, and has not done so, it may be concluded it was but a casual "seepage" at the change of character in the rocks pierced. As stated, the weekly return is again unsatisfactory, but the news that "the stopes are looking well" is of importance. The average weekly return of bullion for the year ending August, 1874, was $39,200; for the year ending August, 1875, $42,700; a considerable increase, but not equal to the expectations formed from the results for the half-year ending February last. We are informed that the following cablegram has been received since the usual Tuesday's telegraphic message:—"Struck ore to-day in drift from winze, 50 feet below the 600." The *Eureka Sentinel* of Sept. 29 reports the strike in the Richmond Mine of what it terms "a vast body of water," but which appears from the manager's report can have been only mere "seepage." The same paper states:—"The general impression is that the ores of Ruby Hill, now that the water level has been reached, are to undergo a radical change; for our part, we feel sanguine that they will become richer, and freer of base metal. This is, if we remember correctly, in accordance with the theory advanced by Mr. Clarence King, on the witness-stand, in the celebrated case between the Richmond and the Eureka Consolidated. Mr. King predicted, if we do not forget the purport of his testimony, that we were to encounter free milling ores in Ruby Hill below the water-level; so far, all his prognostications have been verified with reference to this mine. Therefore, it is but fair to accept with confidence the rest of his theory. Great interest now centres in the Richmond, and its development below the water-line will be watched with a degree of solicitude seldom witnessed in connection with mining operations. Whether stamping-mills are to supplant smelting-furnaces is the question to be solved in the near future. It is true, however, there are large reserves of ore near the surface, which can be utilised for smelting the comparatively free ores of the lower levels for a long time, until, in fact, mills can be made to take the place of furnaces, if such a change be necessary."

This speculation is somewhat premature, so far as existing facts are concerned, though it may seem probable, judging by the experience in the adjoining mine, that rich quartz ore of a similar character to the Comstock may be met with in the Richmond; but even if this should be so it would be, doubtless, employed for a long time as a flux for the upper ores, and milling would not be required till the quartz became the preponderating bulk of the ore to be treated. It is worthy of note that the site for the station of the new railroad has been finally fixed below the Eureka Consolidated Works; it may, therefore, be concluded it will be close to the Richmond Works. The railroad is expected to be in full operation to Eureka by Nov. 1. The closing price is 9 to 9¼.

Eberhardt and Aurora shares have been firmer upon favourable dividend anticipations, and close 8¼ to 8½. Exchequer shares have been in demand at ⅝ to ¾; advices have been received announcing a discovery in the hanging-wall of the 200 ft. level. 200 ft. north from shaft, the lode is described as bold and massive, and a large body of rich pay ore is looked for. The assay of the specimen is—gold, $85·11; silver, $5710·83 = $5795·94 = 1207*l.* per ton of 2000 lbs. Half of the specimen has been forwarded to London. The lode is stated to be a decidedly true fissure vein, and a champion lode, being from 6 to 30 ft. wide. Under these circumstances the directors do not consider they will be justified in continuing to issue the company's debentures on such advantageous terms to subscribers as have been lately offered. The greater part of these debentures have been already subscribed for, leaving a balance of only 3500*l.*

In Gold Quartz shares the business has been restricted. St. John del Rey, 380 to 390; the advices appear in another column. Don Pedro, 7-16ths to 9-16ths. Independence flat at ⅜ to 1¼; the new mill is ready to go to work, but the superintendent reports he has not been able to lay open sufficient pay ore to supply it. This is a great disappointment after the confident statements of Capt. Kitto that he had discovered about 130,000 tons of ore that would mill $7 or $8 per ton. On the faith of which, and Capt. Jenkins's statement that he hoped to make the mine as profitable as the Sierra Buttes, which he had just left, the directors erected the new mill at a cost of nearly 6000*l.*, including the expenses of exploring and prospecting the lode, so far without laying open the pay ore reported to be in sight. The latest telegram reports the prospects as "more favourable." Port Phillip, 11-16ths to 13-16ths; rather flatter, although latest telegram reports the yield for October at 5 dwts. 9 grs. per ton, and the profit at 630*l.*, with a remittance of 650*l.*, and the 11th level commenced on the course of the vein. The mine is gradually getting into a more profitable condition, and when the lodes are further opened out at the bottom levels better results are anticipated. Frontino and Bolivia, 1¼ to 1½.

The latest advices report the monthly profit at $6000 to $7000 per month, and that the mines continue to develope well, and are in a satisfactory state. Cicilia and Neuva Cicilia are rich, Bolivia and Tigre good. Silencia rich, but doing little, only keeping the water, and driving the levels, whilst the engine is being put up. The financial position is improving, as the company would have something to its credit at the end of August, instead of being in debt. Chontales, ½ to ⅝; the advices by the last mail show a profit of about 77*l.* for the month of August. The manager reports that owing to a run in one of the mines he was enabled to get sufficient ore to the mills—hence his small profit. Details will be found in another column. Javali, ½ to ⅝.

In Hydraulic Mines shares are increasing, and an amount of business has been recorded. Blue Tent, 4½ to 5; Prof. Price cables that the aqueduct is absolutely completed. This is a very important work, as by it an immense body of water, larger, it is said, than has hitherto been used by any English company, will be brought to the mines from the Sierra Nevada Mountains—a distance of over 30 miles. The company may now look for very profitable results, as we are informed that gold to the value of 1200*l.*, was taken from one claim in 90 hours, just before washing was suspended at the close of the season. Sweetland Creek, 3 to 3½; washing was progressing slowly on account of a short supply of water. Mr. McLean, however, anticipated being able to run until the end of November. Everything is progressing as usual. Birdseye Creek, 1⅞ to 2; Mr. G. S. Powers is actively engaged in putting the claim in order, repairing flumes, &c. The prospects for the next season are good.

Cedar Creek, ½ to ¾; there is no fresh news from here. Col. Ludlum is doing all in his power to get matters ready for next season's washing. Oregon, preference, 4 to 4½; the superintendent is pressing on all the works here with the utmost speed, and is making very satisfactory progress. He has no doubt but that he will be quite ready before the rains commence. Further investigations show the extremely rich gravel owned by the company. The preference capital (12,000*l.*) is now considered more than ample to complete all the necessary works and put the property up for washing.

Great Wheal Vor shares have advanced to 1⅞, 2; the lode in West Metal shaft continues to improve in sinking, and is now worth nearly 50*l.* per fathom. The end driving west at the 70 is looking very well, and at the 40 the lode and branches will average 4 ft. wide, and good saving work for the stamps. The Balmynheer Tin Mining Company has just declared its first dividend of 10 per cent., payable Nov. 1 next.

Grogwinion, 3¼ to 3⅜; Wye Valley, 4¼ to 5½.; good reports continue to be received from the mine. West Wye Valley, 3¼ to 4½; there is a good demand for these shares for investment. Melindur 2 to 2½; Llandloes, 3 to 3½. West Goignan, 1½ to 2; new machinery is making rapid progress towards completion. South Cwmystwith, 1½ to 2. Pennerley, 1⅞ to 1⅞; the old mine is looking about the same, at Potters Pit the shaft is being sunk below the 75 with all dispatch. The 75 is to all appearance just entering into the run of ore ground. The winzes below the 65 are yielding about the same as last reported. Bog, ⅜ to ½; there is no material alteration in the mine. The various bargains are returning about the usual quantity of ore. The sampling this week is 40 tons lead and 100 tons blende.

Subjoined are the closing quotations:—

Anheson, 1 to 1⅛; Bog, ⅜ to ½; Carn Brea, 57½ to 60; Devon Great Consols, 3 to 3⅛; Dolcoath, 47 to 49; East Caradon, 2 to 2⅛; East Lovell, 6¾ to 7¼; East Van, 1⅝ to 1¾; Great Laxey, 16 to 17; Great Wheal Vor, 1½ to 2; Hingston Down Consols, ⅞ to 1; Marke Valley, 3 to 3⅛; Pateley Bridge, 6¼ to 6¾; Parys Mountain, ½ to ⅝; Pennerley, 1⅜ to 1⅞; Penstruthal, 10s. to 12s. 6d.; Roman Gravels, 12⅝ to 13⅜; Tankerville, 10½ to 11; Tincroft, 25 to 27; Van, 20 to 20; Van Consols, 1⅝ to 1⅞; West Basset, 6 to 6¼; West Chiverton, 16 to 17; West Tankerville, 1⅛ to 1⅜; Wheal Grenville, 2 to 2⅛; Almada and Tirito, ⅝ to ¾; Birdseye Creek, 1⅞ to 2; Blue Tent, 4½ to 5; Cedar Creek, ½ to ⅝; Chontales, ⅜ to ⅝; Colorado Terrible, 2¼ to 2⅜; Don Pedro, 7-16ths to 9-16ths; Eberhardt and Aurora, 8¼ to 8½; Emma, 1⅝ to 1¾; Flagstaff, 1 to 1¼; Frontin and Bolivia, 1¼ to 1⅜; Independence, ¾ to 1¼; Javali, ½ to ⅝; Kapanga, ⅞ to 1⅛; Last Chance, ¾ to 1; Oregon (pref.) 4 to 4¼; Malpaso, ⅜ to ½; Malabar, ⅜ to ½; New Quebrada, 3¼ to 3½; Rica, ½ to ⅝; Richmond Consolidated, 9 to 9¼; Santa Barbara, ¾ to 1; San Pedro, 1¼ to 1⅝; Sierra Buttes, 1½ to 1¾; St. John del Rey, 380 to 390; Sweetland Creek, 3 to 3¼.

HALIFAX SHARE MARKET.—Oct. 21.—The following quotations are from Mr. J. H. Thackrah's list:—Halifax and Huddersfield Union Bank, 30; Halifax Joint-Stock Bank, 28½; Halifax Commercial Bank, 24¼; London and Yorkshire Bank, 26s.; John Crossley's, 13¾; Whitworth and Co., 9; Elland Gas, 20; Rastrick Gas, 18½; Bradford Brick and Tile, A, 24; B, 7½; Charlestown Brick and Tile, 9¼; Ripponden Commercial, 12¼; Hebden Bridge Cotton, 10; Yorkshire Boiler Insurance Company, 21s.; Norton Brothers, 8¼.

OLD BATHOLES.—It will be seen by the advertisement in to-day's Journal that tenders for the purchase of this property must be sent to the liquidators on or before the 30th inst. The mine is in the same district as the celebrated and very profitable Tankerville, Roman Gravels, and Snailbeach, and is between the two latter mines.

WEST CHIVERTON.—Particulars of the sampling of lead and blende for the last four weeks will appear next week. The gross amount is computed at about 2500*l.*, being about 400*l.* more than the previous month's sale.

DENBIGHSHIRE CONSOLIDATED.—Since the last meeting favourable progress has been made in the western part of the mine, and it is expected that the 112 fm. level will be in 25 yards up to the run of ore proved in Parry's shaft, worth 3 tons of lead per fathom. From indications it is believed that great deposits of ore are below the present workings, judging more particularly from some few solid lumps of ore recently taken out. The directors propose to increase the operations, and with this object are issuing the reserve shares at a most reasonable figure. The prospects are very satisfactory, and credit is due for the manner in which the development has been conducted.

SUCCESSFUL MINING—BALMYNHEER MINE.—Referring to the list of sales of tin in Cornwall, published in last week's Journal, it is gratifying to notice a mine whose sales therein recorded now appears for the first time in the list of dividend-paying mines. We refer to the Balmynheer Mine; the company working the pooperty has been in possession for about 12 months, during which time the most satisfactory results have been achieved; the sale of tin amounted to 2100*l.*, being the first sale. The mine has been worked under a vigorous and efficient management, and we hail the appearance in the list of dividend mines of the concern with great hope. The result to the capitalists who were spirited enough to enter upon the enterprise at a time when Cornish mining was anything but encouraging, is no more than was deserved, and we believe that the dawn of future prosperity in this branch of our industry is just commencing to break upon us. The importance of this cannot be overestimated, and we see no reason why in the future, and at no far distant date, fortunes may not be built scarcely inferior to the wealth of former mining days in Cornwall. We look forward to the success of other mines which have been sadly neglected, and hope soon to find them follow also in the Dividend List.

ANGLO-AUSTRALIAN GOLD MINE.—In the Journal of Oct. 2 we alluded to the favourable news received from this mine by last mail, and spoke of it being in a good district. We may now mention that it is on the same line of reef, and within a short distance of mines which are now, and have been for years past, paying good dividends. The most celebrated of these is the well-known Messrs. Rowe's mine (not half a mile from the Anglo), which for the past eight years has paid large and regular dividends. The last 16,000 tons of quartz they have crushed have yielded nearly 10,000 ozs. of gold, of the value of 40,000*l.* Then there is the Black Hawk Mine, which in the last three years has paid good dividends, besides supplying from the returns thousands of pounds for the purchase and erection of machinery, which, indeed, has been paid for out of the profits, besides the dividends, no call having been made on the shareholders. In the six months ending June 30 last there were sold 1405 ozs. of gold for 5594*l.* 6s. 5d., the profit being 2222*l.* These facts should draw increased attention to the Anglo-Australian Mine, which, to all appearance, has chances equal to the others, and which has already erected most expensive and efficient machinery, besides having gone a long way to open out the mine.

SANTA BARBARA GOLD.—It will be seen, upon referring to the report in another column, that this mine has at last turned the corner. The month of August produced a profit of 617*l.*, which will now rapidly increase, as the extra stamps will now be at work, and the lode has increased in width to 9 ft. The paid-up capital is only 19,000*l.*, and it seems probable that the profits during the remainder of the year may average 1000*l.* per month.

PATELEY BRIDGE LEAD MINES AND SMELTING COMPANY (LIMITED).

MESSRS. F. W. MANSELL AND CO. (SWORN BROKERS) are in a position to afford the LATEST INFORMATION from these VALUABLE MINES, and strongly recommend the immediate PURCHASE of the SHARES in BLUE TENT, PATELEY BRIDGE, RICHMOND, EXCHEQUER, and GREAT WHEAL VOR. See page 1163 in to-day's Journal.
14, Pinner's Hall, Old Broad-street, E.C.

THE PATELEY BRIDGE LEAD MINES AND SMELTING COMPANY (LIMITED).

WANTED, TWELVE SINKERS, TO CONTRACT, BY TENDER, for SINKING the ENGINE SHAFT 11 fathoms in limestone. Good blasting ground.
All particulars may be obtained on application to the office, on the above mines, near Pateley Bridge, Yorkshire.

TALARGOCH MINE, DYSERTH, NEAR RHYL, FLINTSHIRE.

WANTED, a MINING CAPTAIN, for the ABOVE MINE.—A competent knowledge of machinery and engineering, as well as of underground work, required.
Apply, with references, qualifications, and terms, to the Chairman of the Talargoch Mining Company (Limited), Box 22, Chester.

WANTED, in good condition, a SET of PUMPS (about 30 fms.) from 12 to 14 inches diameter, with WORKING BARREL, CLACK PIECE, and SPEAR RODS, all complete.
State lowest price to the HAREHOPE GILL MINING COMPANY (Limited), Black Hill, Durham.

WANTED, a Gentleman, who understands Spanish, to take the MANAGEMENT of some IRON SMELTING WORKS in SPAIN. He must possess a knowledge of the SPONGE PROCESS, in which Charcoal and Wood only are used for Smelting the Ore. He must also be conversant with Book-keeping and Mining Engineering.
Those only possessing practical experience are requested to apply by letter to THE FARNCOMBE MINING COMPANY, Kemp Town, Brighton.

WANTED, 24 in. cylinder WINDING ENGINE, with DRAWING CAGE and BOILER, complete.
State price and where to be seen, to "M.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

WANTED.—The Advertiser (aged 24) desires a SITUATION in any healthy climate. Has a practical and theoretic knowledge of MINING, MINERALOGY, CHEMISTRY, and ACCOUNTS.
Address, "D. E.," 26, Fleet street, London, E.C.

CARBONATE OF BARYTES.

WANTED TO PURCHASE, in small or large quantities, up to 2000 tons. State strength, and lowest price delivered on rail or board of ship, to W. BOUSTRED, Barytes Manufacturer, Yockleton, Salop.

A GENTLEMAN, who has taken his highest degrees in a School of Mines abroad, and who has since had several years of experience in Mining in England and other countries, of thorough competency both in underground and surface surveying, levelling, designing, good draughtsman, with a fair knowledge of analytical chemistry; speaking English, French, and German; wishes EMPLOYMENT in the capacity of a CIVIL and MINING ENGINEER to a company or to an engineer. First-class references and testimonials.
Address, "Delta," MINING JOURNAL Office, 26, Fleet-street, London.

AUSTRALIAN UNITED GOLD MINING COMPANY (LIMITED) *IN LIQUIDATION.*
HOLDERS of SHARE WARRANTS TO BEARER of the Australian United Gold Mining Company (Limited), in Liquidation, are requested to forward to the undersigned, on or before the 30th October inst., PARTICULARS of the NUMBER of each WARRANT, the number of shares it represents, and the distinctive numbers of the shares comprised in each share warrant held by them, in order that they may participate in the division of assets about to be made.
H. W. LAMB, J. H. MURCHISON, } Liquidators.
8, Austinfriars, London, 14th October 1875

ORES, &c.

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MIXED METALS and DROSS, containing LEAD, COPPER, TIN, or ANTIMONY.

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Full particulars as to these valuable properties may be had on application to the Managing Director,—
J. FLETCHER PAGEN,
CHAPEL HEYS, NEAR BODMIN.

LEAD ORES.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Oct. 12	Powell Consolidated	20	£14 8 0	Burry Port Company.
14	Great Darren	14	19 2 6	South Wales Company.
	Llanfyrnach	20	14 5 6	Weston, Son, and Co.
18	Great Laxey	100	24 12 6	Burry Port Company.
20	Dyliffe	80	15 0 6	Sheldon, Bush, and Co.
	Wye Valley	30	14 12 0	Nevill, Druce, and Co.
21	Van	200	15 0 0	Walker, Parker, and Co.
	ditto	100	15 14 0	Nevill, Druce, and Co.
	ditto	50	15 2 6	Panther Lead Company.
	ditto	50	15 2 6	Sheldon, Bush, and Co.
	ditto	50	15 0 6	ditto
	ditto	50	15 2 6	Weston, Son, and Co.

BLENDE.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Oct. 20	Wye Valley	20	£ 1 5 0	Bagillt Smelting Co.
	ditto	20	1 5 0	Villiers Spelter Co.
21	Van	75	4 7 0	Vivian and Sons.
	ditto	75	4 7 0	Dillwyn and Co.

BLACK TIN.

Date.	Mines.	Tons c. q. lb.	Price per ton.	Amount.	Purchaser.
Oct. 16	West Godolphin	11 14 0 0	£51 7 6	£ 601 1 6	Bolitho.

PERUVIAN TIN ORE SOLD IN LIVERPOOL on Oct. 20.

Messrs. Williams, Harvey, and Co. purchased 5 tons at 46*l.* 15s.; 7¾ tons at 53*l.* 2s. 6d.; and 1½ ton at 52*l.* 2s. 6d.: total, 14 tons.

COPPER ORES.

Sampled Oct. 6, and sold at the Royal Hotel, Truro, Oct. 21.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
South Caradon	90	£5 12 6	Glasgow Caradon	70	£6 9 0
ditto	77	5 2 6	ditto	27	3 11 0
ditto	74	8 17 6	Bedford United	85	2 14 0
ditto	73	6 12 6	ditto	65	3 12 0
ditto	59	7 14 6	ditto	50	8 3 6
ditto	47	14 0 0	ditto	40	4 7 0
ditto	40	15 10 0	West Maria & Fortescue	85	3 17 6
Marke Valley	85	3 16 6	ditto	65	2 13 0
ditto	80	4 5 6	ditto	10	7 11 6
ditto	63	5 6 0	East Caradon	60	5 1 0
ditto	61	4 2 0	ditto	55	5 10 6
ditto	48	4 3 6	Gawton	55	3 5 6
ditto	18	2 18 6	ditto	51	3 1 6
Hingston Down	94	2 7 6	ditto	7	8 17 6
ditto	91	2 3 6	Wheal Russell	66	2 19 6
ditto	80	4 12 6	ditto	36	2 14 6
Glasgow Caradon	77	5 11 0	Phœnix	100	3 3 6
ditto	71	5 18 0	Prince of Wales	70	2 14 6

TOTAL PRODUCE.

South Caradon	460	£3775 0 6	East Caradon	115	£ 606 17 6
Marke Valley	355	1504 3 6	Gawton	113	399 1 6
Hingston Down	265	791 3 6	Wheal Russell	102	294 9 0
Glasgow Caradon	245	1393 12 0	Phœnix	100	817 10 0
Bedford United	240	1046 5 0	Prince of Wales	70	190 15 0
West Maria, &c.	160	577 7 6			

Average standard ..... £115 1 0 | Average produce 6⅝
Average price per ton £5 2 6
Quantity of ore ..... 2225 | Quantity of fine copper 152 tons 4 cwts.
Amount of money £11,396 5 0
LAST SALE.—Average standard ..... £115 11 0 | Average produce 6¼

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount.
Vivian and Sons	516	£3069 5 6
Nevill, Druce, and Co.	226	641 4 6
Williams, Foster, and Co.	378	1937 3 6
Mason and Elkington	463	1635 0 0
Charles Lambert	303	1273 18 9
Sweetland, Tuttle, and Co.	338	2839 12 9
Total	2225	£11,396 5 0

NO SALE on Thursday next, October 28.

Copper ores for sale at Tabb's Hotel, Redruth, on Thursday week.—Mines and parcels.—West Seton 455—East Pool 232—Crenver and Abraham 228—West Tolgus 220—West Basset 188—South Crofty 140—Botallack 118—Carn Camborne 88—Cathedral 70—West Poldice 70—Levant 63—St. Aubyn United 57—North Busy 56—East Grenville 52—Verran's Ore 50—New Rosewarne 37—West Roskear 32—Wheal Unity Wood 15—West Goriand 14—North Levant 12—Wheal Grenville 7—Wheal Buller 6—West Godolphin 6—St. Ives Consols 3—Richard's Ore 2=2201 tons.

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THE GENERAL MANAGEMENT OF COLLIERIES IN SOUTH WALES UNDERTAKEN. OFFICES and SECRETARIAL DUTIES provided in London. A fixed yearly sum charged according to output of colliery. Financial facilities if reqnired.

Address, "Secretary," Colliery Agency, No. 4, Lothbury, London, E.C.

Notices to Correspondents.

*** Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be *filed* on receipt; it then forms an accumulating useful work of reference.

COPPER SMELTERS—"W. B. J." (Abersoch).—A corrected list of the smelting, arsenic, metal extraction, and barytes companies shall be published in an early Journal.

SOUTH AURORA.—Can any of your correspondents give me information concerning the South Aurora Mining Company? I am, unfortunately, the holder of 200 shares, and have not heard anything concerning the company for some considerable time past. Is the company still in existence, if so, what are its prospects? —A SUBSCRIBER: *Bedford-square, Oct.* 21.

SPIDER LINE—"H. R." (Manchester).—The method of drawing gold and platinum to a spider line for the field of the telescope consists in coating the wire to be drawn down with silver. The coated wire is then pulled through the ruby with which the draw bench is fitted, and when extremely fine the silver covering is dissolved off with acid, leaving the almost invisible core, one mile of which weighs only one grain, as the spider line required.

SHARE DEALING.—We never interfere in the sale or purchase of shares; neither do we recommend any particular mine for investment or speculation, or broker through whom business should be transacted. The addresses of most of the latter appear in our advertising columns.

Received,—"An Old Subscriber" (Melbourne): We are always glad to have such information, and shall feel obliged by your forwarding full particulars—"F. H." (Hanley)—"N. T." (Yarmouth)—"M. G. M."—"R. W.": Next week—"Shareholder" (Van Consols): Write to the Secretary at the office—"Engineer" (Middlesborough): Send the particulars as fully as they may desire to have published —"N. R." (Glasgow): Yes—"Cornubiensis": We could not publish such a letter; it would create a personal correspondence we have no desire to encourage —"Shareholder" (Roman Gravels): You have been wrongly informed—"B. C.": Perhaps next week—"Rough Notes by a Visitor," on the Joint Meeting of Northern and Midland Mining Engineers, shall appear next week—"Shareholder" (Wheal Uny)—"Correspondent" (Baltimore): We shall be glad to have the information as frequently as convenient—"Shareholder" (Wheal Grenville): We cannot publish the letter without the writer's name being appended—"F. A."—"N. B.:" On enquiry we have reason to believe that the statement as published is perfectly correct—If a "Grenville Shareholder" will write a temperate statement of his views "as to how the company should be managed to ensure success" it shall appear. His present letter is altogether too personal.

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, OCTOBER 23, 1875.

THE COAL INDUSTRY OF THE NORTH OF ENGLAND.

In our article last week upon the iron and coal trades we suggested that the Durham mineowners might not long be able to continue to pay the current scale of wages, considering the very heavy charges at the pits, and the comparatively low rates they are receiving for their commodity. We now observe that at one colliery the owners have asked for a reduction of 25 per cent. upon the gross earnings, but that at this the men have demurred, and are now upon strike. The miners at another of the Durham collieries are likewise upon strike, a dispute having arisen between the workmen and the colliery officials. Towards the end of the month it is likely that the Durham colliery owners generally will propose a considerable drop in the wages of their men, for in the majority of cases the pits are working only three days a week, and in others trade is so bad that men to find employment have had to leave the collieries at which they have long worked with regularity. Profits must have been brought to a wretched level before Northern mineowners would consent to part with their old hands, for it is notorious that the Durham mineowners and men get very partial to one another. And no wonder. Durham and Northumberland colliery owners have no superiors in their craft. Not a few of them have had University education, and returning home have further fitted themselves for their business by passing through the office of the mining engineer, at the same time that they have familiarised themselves with the whole work of a colliery both above and below ground. The Northern colliery proprietors are, furthermore, men of broad sympathies, disposed to treat workpeople with that consideration which every man who has qualified himself for the work that falls to his own hands feels for those whom it is his privilege to direct, and who it may be have in their sphere been hardly less diligent in their efforts to make themselves competent to rightly discharge the functions devolving upon them as workers in the great industrial hive of the nation. And as the colliery proprietors of our northernmost counties take prominent rank among their compeers, so the colliers thereabouts are equally well placed among the operative coal getters the country through.

What men can and what men dare do your pure Northern collier, whether master or man, has done, is doing, and will do. The columns of the *Mining Journal* have frequently recorded instances of all this. But, avoiding here any reference to heroism and to eminent engineering skill with which that heroism is again and again accompanied, we linger for a moment upon the highly encouraging features associated with the manner in which the colliery owner and the colliery worker throughout Northumberland and Durham attempt, as a rule, to continue to labour together to the advantage of each and of both. No one who has any knowledge of the thoroughly genial and mutually respectful way in which the employers and the operatives have deliberated upon the settlement of disputed points, either as to work or wages, can have other than the highest respect for men who thus debate and decide. We happen to be tolerably familiar with the style in which the Durham and Northumberland coalowners and their miners have tided over such differences, and we, therefore, speak with personal knowledge in all we say, but it needs not that there should be close familiarity with such proceedings to have arrived at a sense of respect for the mutual confidence which they entertain one for the other. It was only a week or two ago that we drew prominent attention to the fact that so firmly convinced were the employers that the men were honest in their belief that "shot-fast" coal was as good as "nicked" coal that they even consented to the chartering of a vessel to Malta and back, laden with coal partly gotten by the one method and partly by the other. Nor was this all. The men on their part, though the voyage was inconclusive upon the problem which it was desired to solve, and though a personal inspection below ground of the two methods by the arbitrator was likewise inconclusive, were so desirous that there should be no rude disturbance of their relations with their masters that they agreed to accept as conclusive the results which might come out upon an examination of the masters' books, showing the relative prices obtained for the coal wrought under the two methods specified.

When it is possible to quote such very gratifying instances of a mutuality of respect and confidence, it would be a thousand pities if the good name which Durham and Northumberland have hitherto secured for themselves in these particulars should be lost by hasty or inconsiderate action on the part of the men. In times past they have looked difficulties fairly in the face, and they have been guided by the outcome. We trust they will do no less now. For ourselves we know that the masters have long been delaying the step which now seems almost inevitable from a wish that not only should prices be upheld but that men's wages should be maintained at as high a figure as is compatible with the solvency of those who employ them. This, as we have intimated, has been done at a great sacrifice to masters, yet they delay any rigorous action until it shall be beyond all possible question that the course which they have long seen to be necessary can be postponed no longer. If, therefore, at the end of this month Northern colliery owners should find it imperative to give notice for a large drop, we hope the men will show no less confidence than in time past, as well in their employers as in those peaceful negociations which have hitherto served both so well, and upon both has reflected honour.

DISASTERS IN THE AMERICAN IRON TRADE.

It is no news to the readers of the *Mining Journal* that the iron trade of the United States is in a bad way, but it will, we think, be news that failures in the iron trade there are just now what the Americans themselves term "prolific." The information now to hand is that there have failed in the Eastern iron districts of the States the Jagger Iron Company, with liabilities exceeding a quarter of a million, and also the Peekshill Iron Company; in the West, Messrs. GLASS, NEELY, and Co., of Pittsburgh; the Middlesex Rolling Company at Middlesex, Pennsylvania; and the Phillips and Jordan Company, and Anchor Iron and Steel (the old Gaylord Iron and Pipe Company) at Cincinnati. To this narration is added: "We sincerely hope that this is the gust with which the storm will blow itself out." The *Mining Journal* concurs in the wish, though it does not follow that the desire will be realised. During a time of such financial disasters as those which are signalising the business relations of Canada with some of her creditors it would be almost impossible but that this should happen, for the United States ironmasters have lately been doing an extensive trade with the Dominion. But it did not need that buyers in Canada of the products of the mills and forges of the United States should be unable to pay their debts to bring down some of the American iron firms. That many of them have held up so long is remarkable, inasmuch as there has been so little demand for their produce during the last four years. Throughout that time American manufacturing enterprise has been sadly crippled by the financial calamities with which most of our readers are familiar. To have borne up so long is highly creditable alike to the American ironmasters and also to those bankers with whom they do business. It is well known that the trading and the legitimate money-lending firms of the United States entertain an extent of confidence in each other which is not generally noticeable in this country, but which, happily, has made itself observed even here likewise during the past few months, thanks, perhaps, to the plethora of unemployed capital, and its cheapness. It is to be feared that if the firms mentioned have now been let down, they have been held up as long as there was the slightest chance of righting themselves.

This is painful, not to Americans alone, but to all engaged in the iron industry in every part of the world, and the American ironmasters, we are sure, have the sympathy of their British compeers. This sympathy is in no degree incompatible with the fact that there are few ironmasters on this side who do not know that the American iron trade has been pushed too far. Encouraged by their great tariff, and by the high rates which iron now and again reaches in this country, almost every spot where there seemed, even to the most sanguine, any probability of iron being made at a profit in America was secured, and there iron mills were laid down. Some of these people had to bring their coal long distances by railway, and their pig-iron was not always very near to them. It is easy to see how impossible it became under such conditions for the iron manufacture to be made remunerative in competition with works more favourably situated. But the list we have given shows, unfortunately, that they are not alone works the most disadvantageously placed which have had to succumb. Seeing that all this has come about at a time when we have been sending so little iron to the United States, as was indicated by our intimation last week, that only 34 tons of rails had been shipped to that country during September, it must, we fear, be assumed that the gust is only a part of the storm. There have been so many changes in the American iron trade that he will be a clever man who, having started some years ago, will be able to by-and-bye maintain his own. Not only have the American ironmasters, as the British, to meet the deceased enquiry occasioned by the growing preference for steel in railway and other uses, but they have also to face the grave question of the adaptability of gas as a fuel in the making of iron in all its stages. This difficulty, though it has not, perhaps, had much to do with the disasters which drew forth this article, will certainly hereafter prove of great magnitude.

The iron trade of America is most undoubtedly in a bad way, but it is with unfeigned satisfaction we make known that whilst this winter may prove an intensely trying period for all classes of United States manufacturers, still that a revival in some of the metal industries is very near at hand. Makers of heavy iron and steel goods in this country have received from their United States agents information of a gratifying nature. It is to the effect that certainly by February we may look for the receipt of orders for goods to be sold in the United States market that shall indicate a considerable revival in the American demand. Upon the strength of that intelligence makers are sending out patterns such as their agents suggest should be at once forwarded. This information, coming from private sources, is confirmed by that which we learn in other quarters, has been sent to hardware merchants both in Birmingham and Sheffield. This latter statement is that the prospects of the fall trade having so greatly improved, it must lead to a conspicuous return of business in nearly every class of the metalliferous products which we have been accustomed to forward to the United States.

ENGLISH COAL IN FRANCE.

The increasing demand for coal in Great Britain, as well as in Belgium and France, seems to render it more than ever desirable that the French should apply themselves energetically to the extraction of the coal which is undoubtedly to be met with in great abundance in the French soil. The Belgians are consuming more and more coal themselves; the Germans are following suit, and in England also coal has become scarce, and comparatively dear, although the severe rates current a year or two since have certainly experienced some mitigation. Under these circumstances, it is not exactly satisfactory to find that France is leaning more than she ever did before upon the coalowners of England for the partial supply of her coal requirements. In 1854 we only sent the French 708,830 tons of our coal, while the quantity forwarded in the same direction in the first nine months of 1875 was 2,001,214 tons. At this rate we are sending the French about four times as much of our coal as we dispatched to them 20 or 22 years since. This must be pronounced a remarkable result, when it is remembered that in these 20 intervening years the French made great progress with their coal extraction. French statesmen would undoubtedly be pleased to see France independent of her neighbours in the far from unimportant matter of her coal supply, and recently French legislation has perserveringly aimed at the increased development of the mineral resources of the Republic; but current circumstances have been too strong even for French legislators, and the result is that France is now compelled to take more coal than ever from *perfide Albion*.

In the first place, the wars into which the French have such an unhappy knack of drifting reduce the available supply of adult able-bodied labour in France. The German war, for instance, must have made many awkward gaps in the ranks of those who would otherwise have been available for coal mining or other industrial pursuits; and without a reasonably good supply of intelligently directed labour it is obvious that the unutilised coal of France must still remain buried in the bowels of the earth. Then another difficulty which presents itself is the tendency of the rural French to desert the country districts for the great towns, and especially for Paris. The French working classes have a strong taste for town life; they acquire a taste for what General TROCHU called the "civilisation of Paris;" and the result is that every 20 years or so hundreds and thousands of them perish in some senseless strife, and their labour is, of course, lost to the country. Then, finally, we must not omit to notice the chilling influence which the constant revolutions have exerted on the enterprise of French capitalists. The wealthier French have embarked readily enough in Turkish, Peruvian, or Spanish loans; they have pierced the Isthmus of Suez, and have helped to endow almost every other European country with the vast network of railway communication which forms such a remarkable industrial feature of the epoch. The Bourse of Paris is, perhaps, the most international in Europe. But while the French are cosmopolitans as regards the investment of capital, they have been in no great hurry to open out the coal resources of their own country. We do not say that there are no coal mining companies in France—on the contrary, there are several which return good dividends to their shareholders, and which have, undoubteply, helped to extend the coal production of France. But still French coal is not worked with anything like the vigour and resolution with which it should be attacked. The French are content to obtain coal from Great Britain, from Belgium, from their old antagonist, Germany—from any quarter, indeed, from which it is forthcoming in any sensible quantity, and their own coal is still only worked, in consequence, in a *festina lente* fashion. It is a most remarkable fact that the consumption of English coal in France, far from decreasing, has increased to such an extent that it is approaching an aggregate of 3,000,000 tons per annum. Such a result as this is scarcely creditable to French capitalists.

THE SLATE TRADE.

The slate trade of North Wales is at the present time very flourishing. The demand appears to be greatly in excess of the supply, and notwithstanding the late rise in price, orders are very pressing. Notice has been given by all the quarry proprietors, both in Merionethshire and Carnarvonshire, of a further rise for Nov. 1 of about 10 per cent., making a total rise within the last three years of about 33½ per cent. on some sizes, and 50 per cent. on others. Best slates, 20×1, which were formerly quoted at 135s., are now 180s., and 16×8, and 14×10, which were formerly 63s., are now in great demand at the advanced tariff price of 100s. These quotations are from the published list of the Carnarvon Slate Club.

The rise is attributable to several different causes. Prices were formerly regulated by the tariff adopted at the two large quarries of Penrhyn and Dinorwic, belonging to Lord PENRHYN and Mr. ASSHETON SMITH, who, being freeholders, had no royalty to pay, and whose quarries having been well opened out at an immense expenditure during a period of near a century, were capable of being very advantageously worked, and yielded about 100,000 tons per annum each at a moderate cost, whereby the proprietors were enabled to control the market, and keep down the prices, to the discouragement and detriment of the small quarry proprietors, all of whom found it difficult, and many of them impossible, to make both ends meet, and pay their way. The yield in these smaller quarries, nevertheless, gradually increased until they produced in the aggregate much larger annual quantity of slates than either of the two large quarries above named; and the proprietors of these smaller quarries having determined to coalesce, proceeded in 1872 to form the Slate Club at Carnarvon, and by acting together at once obtained if not controlling influence, at all events a powerful voice, in the regulation of prices.

According to the present published tariff of the Carnarvon Slate Club, by which all the smaller quarry proprietors who are members are governed, the prices range about 5s. per 1000 higher than Penrhyn and Dinorwic, which, with the additional charges for carriage, &c., the distance from the ordinary places of delivery being somewhat greater, would make a difference of fully 4 per cent. to the slate merchant if he could obtain a regular supply from either of the large quarries at their published tariff prices; but the trade at large can not do this. An additional 5 per cent. is charged both at Penrhyn and Dinorwic on all orders under six truckloads of not less than 30 tons sent by rail to one place of delivery, and, moreover, a system of middle men or slate agents has sprung up, through whom alone many slate merchants can obtain a supply, and the merchants complain that they have to pay these slate agents an advanced price of 5 per cent. and upwards on the published tariff of the quarry.

Although the rise in slates appears at first sight to be excessive, yet it is not really so; it only bears a fair proportion to the rise in other building materials. It has long been notorious that contractors in estimating for buildings, based their calculations on the rise of materials alike, including slates, although they had not then risen, the contractor thus getting the advantage which the quarry proprietors through their supineness were deprived of, although their expenditure in wages, machinery, coal, and other materials was gradually increasing, and they were in many cases expending their capital for the benefit of others.

As a consequence of the present flourishing state of this trade, slate quarries are now in great request, and several quarries, which from the deaths of proprietors and other circumstances have been in the market for some years, have lately been disposed of at good prices, including, amongst others, the well-known quarries of Bryn Hafod-y-Wern, Cefn-du, and Moel Tryfan, and there appears to be every prospect of the demand continuing, a good slate quarry being at the present time one of the most promising investments that can be found.

The Festiniog slates of Merionethshire are greatly in demand for the Continent, and the supply from Port Madoc is almost exclusively confined to shipments abroad, a merely nominal quantity being disposed of for the home market. The cleavage is excellent, and the slates are as regular and perfect to the eye as possible, but they are not nearly so strong and durable as the Carnarvonshire slates, and as the breakage is much greater, they are not sought after by slate merchants for home consumption, who derive their supply almost exclusively from Carnarvonshire.

CALIFORNIA MINES, AND ENGLISH CAPITAL.

The financial crisis, which was the inevitable result of the sudden collapse of the Bank of California, has come to an end without having affected in any way the great mining interests of the Pacific States. It has, on the contrary, confirmed the opinion previously expressed in the *Mining Journal* that this crisis would demonstrate the wonderful recuperative power exhibited by California under the most trying circumstances, and which has never been equalled by any of her sister States of the American Union. Under such favourable auspices confidence can be easily restored on this side in the various and unlimited resources which abound in that country. The extraordinary accumulation of idle capital in England and France is a fact which deserves the serious attention of the intelligent class of men at the head of the different branches of industry in the New World. This accumulation which results from the fear caused by recent failures abroad, and as a consequence from the reluctance of capitalists to invest in foreign enterprises, cannot be of long duration, as it would be destructive to national prosperity, and adverse to the interest of our banking establishments and investing public. On the other hand, European capitalists have experienced by the late confiscation decree of the Turkish Government that there is more risk in dealing with such corrupt class of officials who surround and control the Sultan than to invest their money in new countries like California or Nevada, whose flourishing agricultural, as well as mining, industries are a sure guarantee of prosperity, and which will always enable them to keep their financial engagements. The severe lesson taught by the Turkish financial catastrophe will, therefore, probably have for its immediate effect to turn the attention of British and French capitalists towards the larger fields for safe and more profitable investments which exist on the Pacific Slope.

The sudden resurrection of the Bank of California, and its reorganisation upon a sounder basis, is the best illustration which can be furnished of the marvellous elasticity and recuperative power which characterise the enterprising spirit of the population in the Pacific States. With such wealth at their command no serious financial disaster can be apprehended for a long time to come, especially if the leading financial establishments of San Francisco limit their operations to legitimate banking and mining business, and discourage speculation on the Exchange of that city. The restoration of public confidence will doubtless inaugurate soon a "bull" campaign and raise mining stocks to much higher figures. This new campaign will be keenly observed on this side, and should it not be followed as in former years, by some disastrous panic it will show the

speculation has been backed by a sufficient amount of capital invested in sound mining enterprises, and by a more honest management of public companies. It is a well-known fact that that portion of Californian capital which is devoted to mining stock investment does not represent one-twentieth of the cash money which would be required for the payment in full of the whole list of mining shares dealt in on California-street. It is, therefore, more than probable that said capital is to be more particularly devoted to speculative than to legitimate and permanent investment. Still, if some protective measures could be adopted to exclude from the San Francisco Stock Exchange a certain number of doubtful schemes, then valuable and paying dividend mines would be considerably benefited, and there would be no more of those violent fluctuations in the prices of stocks which create disastrous panics, affect the general mining interests of California, and discourage European capital to seek mining investment. It is, therefore, a matter of the greatest importance for the future prosperity of California and Nevada, and for the security of the English mining investors, that the Bank of California, as well as the Bank of Nevada, which control the great mining industry of the Pacific States, should inaugurate such financial and mining reforms as will restore public confidence on this side, and thus insure the success of valuable mines intended for European markets.

According to the latest information received from Virginia City mining in Nevada is progressing most successfully, and the Consolidated Virginia, as well as the California and other leading mines, have never given better promises; all the mills from one end of the great Comstock to the other are in full operation, and it is expected that an unprecedented quantity of bullion will be forwarded to San Francisco before the expiration of the present year.

ENORMOUS BLASTS WITH DYNAMITE.—Last week a large blast with No. 1 Dynamite took place at Cauldon Lowe Limestone Quarry, near Frogall, in the presence of Messrs. Wm. Frazer (Manager), Thomas Johnson (Dudley), B. D. Viggars (Newcastle), Samuel Thomson (Cardiff), and others. It is usual at this quarry to have heavy blasts with gunpowder, and it frequently occurs that from 2 to 3 tons of powder is used in one charge. To test the strength of the dynamite, it was decided to charge a chamber with 11 cwts.; a shaft about 4 ft. diameter, 34 ft. from face of quarry, was sunk 43 ft. deep through the solid limestone, and at the bottom of the shaft a chamber was formed 9 ft. long, running towards the face of the quarry, the dynamite was taken to the brow of the quarry in 50 lb. boxes, each box containing 10 5-lb. packages; these were lowered down the shaft to the Dynamite Instructor, J. Shepherd, below, who simply placed case upon case in the chamber, until the whole 11 cwts. of dynamite was consumed; the detonator having been fixed in the end of a long safety fuse, one of the cases of dynamite was opened, and the cap or detonator inserted into one of the cartridges; this was all the trouble necessary to explode the whole chamber of dynamite; a load of sods was then placed over the dynamite, and a couple of loads of quarry spoil on the tops of the sods, the fuse was then fired, and in the space of eleven minutes the charge exploded with immense effect bringing down the face of the quarry 34 ft. back for a long distance, the quantity of stone dropped being roughly estimated at 30,000 tons. This shot illustrated at once the great saving of labour in using dynamite, the action of which being downwards there is no need for hard stemming, as is the case with powder. This is the second heavy blast with dynamite at this quarry within the past fortnight.

WARWICKSHIRE MINERS' AND MASTERS' ARBITRATION.—The arbitrators for the masters—Mr. Henry Johnson and Mr. Sam. Spruce, mining engineers, and Mr. Crawford and Mr. Coulson, miners' agents, arbitrators for the workmen, and Mr. Serjeant Wheeler, Q.C., their umpire, held their second and final meeting at the Newdegate Arms, Nuneaton, on Monday, and the arbitrators having failed to agree the decision now devolves upon the umpire, who will shortly make his award. It will be recollected that the workmen after a 16-weeks strike resumed work at 10 per cent. reduction, subject to arbitration, but the masters gave evidence in support of a reduction of 26 per cent. On this occasion the learned serjeant referred to the deplorable nature of strikes, and suggested the desirability of some attempt being made to obtain legislative enactments which would give a binding effect to awards in arbitration entered into by masters and men.

COAL IN INDIA.—The useful blue book, which is annually published under the title of the Moral and Material Progress of India, has just been issued. In it some light is thrown upon the interesting question of Indian coal supply. An extensive seam of this mineral has been discovered in Darjeeling, but its extraction is likely to be attended with difficulty, and the value of the coal does not appear to be high. In Orissa a fairly extensive coal field has been opened out, but the quality of the fuel is rather below the average of Indian coal. In Madras similar discoveries have been made, but here also the quality is very poor. At the Wurrora Colliery there are three seams, the upper one of which is worthless. The middle one, which is 15 ft. thick, and the lower one of 11 ft., are about equal to the average of the better Indian coals. Very little appears to have been done during the year in the development of the Indian iron mines, but a recommendation was submitted to the Government of India by the Central Provinces Administration for the construction of two furnaces capable of turning out about 150 tons per week, and converting the greater part of it into Bessemer steel. On the whole, the report does not show that any very encouraging progress has been made during the year in the discovery or development of Indian mineral wealth.

COAL AND IRON IN THE UNITED STATES.—The Central Pacific Railroad Company is using only steel rails upon its Colosa extension. The anthracite coal production of Pennsylvania to Sept. 25 this year amounted to 14,018,636 tons, against 14,430,427 tons in the corresponding period of 1874, showing a decrease this year of 381,791 tons. It will be seen that the decrease which occurred in the production early in the year has now been nearly made good. The production of bituminous coal in Pennsylvania to Sept. 25 this year was 2,708,967 tons, as compared with 2,604,668 tons in the corresponding period of 1874, showing an increase this year of 104,299 tons. The aggregate coal production of Pennsylvanian anthracite and bituminous combined, to Sept. 25 this year, was thus 16,757,603 tons, against 17,035,095 tons in the corresponding period of 1874. English rails are quoted at New York at $48 to $50 per ton, gold; American rails are quoted at the works at $46 to $50 per ton, currency.

VALUABLE SILVER MINE—DISPUTED POSITION.—The United States Collector at the Port of Sitka recently reported to the Treasury Department that a silver mine had been discovered in Alaska by a practical miner. The Collector has since reported that a party of Canadians, hearing of the existence of the mine, have located and erected a colony in its vicinity, and claiming that it is upon British territory, have applied to the Dominion authorities for an Act of Incorporation, to enter upon its development. The Collector is positive that the mine, which is represented to be immensely valuable, is beyond the western boundary of British America, and within the territory of the United States. The matter is under investigation.

INVINCIBLE TOOL STEEL.—A superior quality of tool steel is now being introduced by Messrs. Guy, Swift, and Co., of Budge-row, Cannon-street, distinguished by the brand "Invincible," and they explain that the formidable item which figures in every engineer's prime cost book for "making and repairing tools" sufficiently explains the reason for the introduction of the steel. They remark that it will be admitted that steel designed for the manufacture of turning tools, chisels, dies, drills, punches, &c., acquires its claim to preference in proportion to the real and practical economy which it achieves in the performance of its duty in the workshop, and considering the important part which tool steel performs, and its consequent direct bearing upon the question of wages—and necessarily the cost of production—it will readily be seen that tool steel exerts a material influence over the success of every establishment where its services are required. The Invincible tool steel is claimed to be the best and cheapest yet discovered, because, while its first cost does not much exceed that of ordinary high-class steel, its durability and power of getting through all kinds of work, from the common work of the shop to the most delicate and difficult of engineers' turning, is equal to about four times that of the tool steel at present in use.

REPORT FROM CORNWALL.

Oct. 21.—Once more we have to commence our report with the remark that there is very little to say. The great sensation of the week has not so much to do with mining as with the local railways. The announcement that the Great Western Railway had determined upon acquiring the Bristol and Exeter line paved the way for the rumour that the South Devon and Cornwall lines would be placed in the same position. The result has been a very great rise in the stocks of both companies, though nothing definite was known as to the terms of the agreement—and, indeed, the existence of the agreement itself was rather a matter of deduction than certainty. Very important results must flow from the welding of all the lines from Paddington to Penzance into one connected whole, not merely in regard to what are now the broad guage lines themselves, but the probable extension of the narrow guage system into the West more rapidly than might otherwise have been the case.

Tin remains just were it was, though a novel phase has recently become known. It is in connection with the importation of Australian tin. We hear that a firm in London, rather influential in the tin trade, has commenced smelting Australian tin on the banks of the Thames. The blocks are stamped with the well-known lamb and flag, much to the annoyance of the English smelters, who have for so many years, almost centuries, sold their best English tin under this mark, which, however, it seems has never been registered as a trade mark. This mode of action, coupled with underselling by about 1*l.* per ton, is now having a very injurious effect upon the price of English tin, and the smelters seem hardly to know how to treat the matter.

There has been no diminution of the interest felt in the borer experiment at Dolcoath, which, by the way, seems to make rather slow progress. It is stated that the first underground trials were attended by the obnoxious "fitchering," or jamming, of the borer. This, however, is clearly to be overcome, inasmuch as it does not attend the working of the borer in the North. One thing is very certain, that the trial will be every way thorough and complete, and will add a valuable chapter to the history of the progress of boring machinery improvement in Cornwall.

The sale of the machinery at Wheal Buller was held on Thursday, but although the number of persons attending was considerable their buying powers seemed to be limited. The engines were not sold, in consequence of the reserve price being fixed above the figures offered.

Among miscellaneous mining matters there may be noted the following:—West Seton, the meeting of which is held to-day, will sample at the next ticketing about 440 tons. Balmynheer Mine, in Wendron, sold above 40 tons of tin a few days since at 51*l.* per ton. The improved price of 3*l.* per ton being entirely in consequence of the different mode pursued in the burning of the tin. The mine is steadily improving, and the monthly returns are likely to increase. The lode recently cut at South Tolcarne is of a highly promising character, the leading part being 5 ft. wide, and containing large rocks of grey and black copper ores. The East Pool lode has been cut into in Wheal Agar, but not yet cut through. So far as seen it is a productive lode for tin. Great hopes are said to be entertained of the New Caroline Mine, which it is believed will lead to the revival of mining in the district. There is a good lode, and the ground is a mixture of killas, or clay-slate, and decomposed grey elvan, similar to the strata in which the largest deposits of copper have been found in most of the greatest and most productive mines hitherto discovered in the surrounding district. For 12 fathoms from the surface the lode for several feet in width is a mass of splendid gossan, and has been proved for a distance of 70 or 80 fathoms in length. The Great Wheal Neptune and several other mines are within a mile south of this sett. The once celebrated Wheal Fortune, Godolphin, and several other eminent mines, are situated a little to the north and east of this sett also.

At West Seton meeting to-day it was announced that Mr. Basset with munificent liberality gave up dues to the amount of 2500*l.* This left 5000*l.* debit, against which there was ore 2500*l.* and 109 relinquished shares. It was decided that the Old Mine shares should be sold, and the remainder thrown over the cost-book; a 5*l.* call made, and the shares divided into 1200. The mine will now make handsome profits—an example of perseverance worthy imitation.

TRADE OF THE TYNE AND WEAR.

Oct. 21.—The demand for house and gas Coals is good at present, and prices have a tendency to rise. The weather has been extremely severe and wintry, and heavy gales have prevailed in the North Sea during the past week, so that the movements of shipping have been much retarded, and several wrecks have occurred of small vessels. The demand for steam coal is weaker, as the export trade to the Baltic and North Europe is almost at an end. The demand for manufacturing coal continues bad, the demand for coke has also fallen off very much, and prices are falling. It is proposed to lay many of the poorer collieries off in Durham unless a reduction in the rate of wages is effected soon. A proposal to make a reduction is to be submitted soon, not later than the end of the present month. The iron shipbuilding trade is very quiet, and engineers are also dull, although the large makers are most of them well supplied with orders. Founders generally continue to be well supplied with orders. This trade has been extremely good during the whole of the past summer. The Chemical Trade continues very dull, the demand being limited for most kinds of chemicals. The whole of the men are still on strike at Depton Colliery, the cause being a dispute about some young men who had been working 12 hours per day. An error occurred in our report of this case; we stated some boys had been employed upwards of 10 hours per day, the fact being that the dispute arose through the employment of some young men upwards of 16 years of age, and, consequently, not included in the Mines Act. There is no appearance at present of the dispute being adjusted.

There is little change in the Iron Trade. There was a large gathering in the Exchange at Middlesborough, on Tuesday, when there was more enquiry for pig-iron, and prices were stiffer. The shipments have continued on a good scale when not interfered with by severe weather. Every week, however, must show a falling-off in this direction, and the home consumption will also be less, judging from all that can be learnt of the condition of the manufactured iron trade. There is no improvement in the enquiry for finished iron, and many rail makers, it is feared, will be brought to a stand shortly. Prices are nominally the same, 6*l.* 15s. for heavy sections, and 7*l.* for light. Bars and plates dull, prices unaltered. The accountant's return showing the net price of iron for the last quarter in the manufacturing departments gives a total average of 7*l.* 16s. 3d. Manufacturing coal slack at 5s. to 7s. at pit's mouth. Coke rather weak.

Mr. T. D. Ramsay, of South Durham Colliery, has satisfactorily passed the examination held at Darlington, on July 26 last, and has been awarded a certificate of competency as manager of mines.

Mr. Robert Pearson Remshaw, Chesterfield, Derbyshire, late of New Seaham Colliery, has duly passed his examination, and received his certificate of competency as manager of mines, at the late examination, held at Darlington.

Mr. John Brown, son of the late Mr. Ralph Brown, manager of Ryhope Colliery, has successfully passed the examination held before the Board of Examiners at Darlington on July 26 last, and has been awarded a certificate of competency as a manager of mines, under the Coal Mines Regulation Act, 1872.

THE "CRANSTON" ROCK DRILL.—A suit was recently instituted in Chancery by Messrs. Brown and others against Mr. Cranston, of Newcastle, in respect of an alleged infringement by the defendant of two patents, of which the plaintiffs were the assignees. These patents relate to rock-boring machines. The first, dated Nov. 22, 1866, No. 3065, a communication from Charles Burleigh, was granted to one of the plaintiffs, Hazeltine, a patent agent. The second, dated Nov. 25, 1869, No. 3411, being a communication from the same Charles Burleigh, was granted to the plaintiff Brown. The defendant Cranston had also taken out a patent for a rock-boring machine. It bears date April 22, 1873, No. 1455. Mr. F. J. Bramwell reported favourably respecting the claims of Mr. Cranston, who, it may be remembered, successfully defended his patent rights, and since the decision was pronounced in his favour the apparatus, which bears his name, has made steady progress, having been put in operation at the works of the River Tyne Commissioners, and at many other manufacturing establishments in the North and elsewhere. We are informed that since the introduction of this drill into Belgium an ingenious process has been patented by Messrs. J. G. Granston and G. Wincqz, of that country, for the purpose of quarrying and "riving" out blocks of stone, in combination with a series of holes which are drilled with the machine, enabling the operators to get out large and valuable blocks without blasting or shattering the rock.

BLAST-FURNACE ACCIDENTS.—Mr. John Holdsworth writes from Westbourne Ironworks, Stockton-on-Tees:—"Seeing an account of another blast-furnace accident in Staffordshire, arising from defective tuyeres, I think it is high time attention was called to the lamentable want of knowledge displayed by some blast-furnace managers in that district; the accidents are owing to the use of the old water tuyere, which is very dangerous. In the Cleveland district they have been entirely discarded for many years, and only the coiled tuyere is used. During upwards of 20 years there has not been a single accident arising from coiled tuyeres exploding."

DISCOVERY OF CANNEL COAL AT AXWELL COLLIERY.—We are given to understand that a seam of cannel coal has been proved at this colliery within the last month. From the analysis made by Mr. John Pattinson, analytical chemist to the Newcastle-upon-Tyne Town Council, it appears this coal possesses an illuminating power of 26 standard sperm candles, and the coal being subjected to distillation in a coal-testing apparatus, was found to contain 10,000 cubic feet of gas. The quality of the coke is quite satisfactory. This colliery has been opened out only for the last 12 months, and coal is being produced from two seams, the quality of which is excellent, and well adapted for gas and coking purposes. The owners of the colliery are Messrs. R. S. Bagnall and Sons, Winlaton. The fitters for the colliery are Messrs H. W. Dodd and Co., Quayside, Newcastle-upon-Tyne—*Newcastle Daily Chronicle*, Oct. 14.

REPORT FROM MONMOUTHSHIRE AND SOUTH WALES.

Oct. 22.—The quarterly meetings of the ironmasters having been held, and the third week of the last quarter passed through, all chances of any change for the better in the iron trade appear to be past. Up to a week or two ago the hope was still clung to that some improvement would take place, but now things seem to have settled down for the remainder of the year. As was anticipated, the quarterly meetings have brought little or no change, but, if anything, business is duller than it has been at all. There are some who believe that among the principal causes of the present depression in trade is the uncertain relations existing between capital and labour, and very probably they are right. There is every reason for believing that had it not been for the unhappy disputes which arose in the early part of the year between masters and men, trade would not have been so bad in this district. The fact seems to be admitted by masters and men, though each side blames the other for it. However, no amount of abuse will alter the fact, and whether the men were to blame for striking, or the masters for locking-out, matters not in one sense, for either way it shows that such disputes are most disastrous to trade, and both masters and men must suffer for them. It is only natural, therefore, to think that if confidence in the relations between capital and labour could only be re-established it would tend more than anything else to bring about a return to activity. Even though there may not be a pressing want of iron at present, both producers and consumers could look a-head more spiritedly, and make preparations for the future in such a way as would be advantageous to them. Time was when some of the finest works of the Principality were kept going actively, even when there was not an order in the market, and thousands of tons of iron were stacked until such time as a market was to be found; but that time has passed, and manufacturers only employ their works to make just so much iron as they can dispose of when it is turned out. Hence the stoppage of so many mills throughout the district.

There is some reason, therefore, for the anxiety which is felt for the meeting of the Conciliation Board; for if that board succeed in devising some means by which the wages rate can be satisfactorily and permanently settled and governed it will not only benefit colliery proprietors and coalworkers, but those connected with the other staples as well. When the prices to be paid for coal are definitely understood it will relieve iron and tinplate makers of a good deal of responsibility and care, and lead to greater freedom in transactions generally. The sooner, therefore, the board begins its meetings the better.

About the same amount of business is being done in the Steam and House Coal Trades, and there is no reason at present for apprehending a falling off. If there were not tolerable prosperity in the coal trade the distress in the district would be unprecedented, for since the decline in the iron trade many hands have found employment in the ever-increasing coal pits that must otherwise have been idle, or engaged in some unprofitable work.

Messrs. Macdonald and Halliday have continued their "stumping" tour in the district, urging the men on to unionism. A great furore has also been caused by the revising barristers in the districts where the lock-out was resorted to, a very large number of the colliers and ironworkers who received poor relief at that time having been disfranchised.

It was currently reported in Ebbw Vale that Mr. E. W. Richards, the esteemed manager of the Ebbw Vale Ironworks, had accepted the responsible post of manager of the Middlesborough (Bolckow and Vaughan) Ironworks, vacant by the resignation of Mr. E. Williams. Since Mr. Richards's elevation to the management of these works he has by his kind, affable, and conciliatory manner in his frequent intercourse with the men won their respect, and he has invariably been looked up to as a safe counsellor and sound adviser. The splendid steelworks will ever stand as a monument of Mr. Richards's engineering skill and of his unwearied perseverance, for they were all erected under his superintendence and direction. It is also stated that Mr. J. J. Richards will retire from the management of the steelworks, a position which he has held for some years with great credit. Mr. E. W. Richards's resignation is regretted on all sides, as the district can ill afford to lose the services of such a gentleman.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE

Oct. 21.—The Iron Trade of South Staffordshire does not present any change for the better this week as regards the demand; but prices show increasing firmness, especially for the common and medium qualities. This seeming anomaly is explained by the fact that stocks in the market are light, and the makers are restricting as far as possible their rate of production. There is, moreover, just a probability that higher prices for fuel may rule before the winter is over, in which case an advance in the rates for iron would be inevitable. What ironmasters most complain of is not the slackness or the demand so much as the undue proportion borne by the cost of production to the selling rates. Few of the ironworks of the district are now in profitable operation, and in many cases there is reason to fear that actual loss is scarcely being avoided. The selling rates for pig-iron range from 2*l.* 17s. 6d. to 3*l.* 2s. 6d. for common cinder, to 4*l.* 15s. for best native all-mine (hot-air), and 6*l.* for ditto, cold-air. North Country hematite pigs are selling in this district at advance of 1s. 3d. per ton on the rates ruling a fortnight ago. Finished iron, with the exception of sheets, maintains only a restricted enquiry; and as the close of the shipping season is now at hand an early improvement of much importance is hardly to be looked for. Common (unmarked) bars are selling at 8*l.*; common sheets (singles) at 11*l.*, and other classes of finished iron of corresponding quality are in the usual proportion to those rates. Branded iron is selling on the basis of 10*l.* per ton for bars.

The Coal Trade of South Staffordshire is somewhat unsettled by the persistent demands of the colliers for an advance in the rate of wages. The probability of any concession being made is, to say the least, remote, as such a step would involve an advance in the selling prices, which the present condition of the trade would scarcely justify. The demand for best thick coal is steadier, and quoted

prices are fairly well supported. Common coal and slack are not in much demand. Operations at the collieries throughout the district have this week been considerably interrupted by the serious floods which have also done great damage to the surface works of the Mines Drainage Commissioners.

The following were among to-day's quotations on the Birmingham Stock Exchange:—Sandwell Park Colliery (New), 27½; Cannock and Huntington Colliery Company, 5½ prem.; Patent Shaft and Axle, 4½ prem.; Oldbury Carriage, 7 prem.; Chillington Iron, 5; John Bagnall and Sons, 5½; Darlaston Steel and Iron Company, 5½; ditto, 7 per cent. debentures (100 paid), 99.

By the explosion of a tuyere made on the old water-jacketed principle, at the Birchills furnaces near Walsall, 14 poor fellows were frightfully injured, and several of them have since died, while others lie in little better than a dying state. The comparative frequency of these tuyere explosions in the district of late have brought into prominence a new tuyere recently invented by Mr. F. H. Lloyd, of Wood Green, Wednesbury. This apparatus is designed specially to prevent the risk of explosion. There is no possibility of any leakage of water into the furnace as in the old water-jacketed or coiled tuyeres, and the blast need never be stopped for the removal of a tuyere until a convenient opportunity occurs, for even if through defective water supply or long wear a tuyere casing should be damaged no harm can arise.

The Willingsworth Colliery Company (Limited) has been registered this week. Its objects are described to be the working of the Willingsworth Colliery, containing about 100 acres, situate in the parish of Wednesbury, and held under agreement for lease from Sir Horace St. Paul. The capital of the company is 20,000*l.*, divided into 2000 shares of 10*l.* each, and the subscribers to the Memorandum and Articles of Association are:—Thomas Lewis, Pennfields, near Wolverhampton, metal broker, 100 shares; James Birch, Pearse Hay Farm, Penkridge, farmer, 50 shares; Henry Fowler, Compton, near Wolverhampton, coalmaster, 50 shares; John Southam, Codsall, near Wolverhampton, ironmaster, 50 shares; David Skidmore, Moxley, near Wednesbury, coalmaster, 100 shares; Henry Hughes, Woodsetton, near Dudley, coalmaster, 100 shares; Elijah Price, Church-street, Bilston, wine merchant, 25 shares.

The Finished Iron Trade of North Staffordshire has shown decidedly more vitality since the quarterly meeting held a fortnight ago. Both enquiries and orders have increased in number and importance. Common bars are selling at 8*l.* 5s. to 8*l.* 10s., and good branded ditto at 8*l.* 10s. to 9*l.* per ton. Boiler-plates are realising 11*l.* 10s. to 11*l.* 15s., and bridge plates 10*l.* 15s. to 11*l.* per ton. There is not much change in the pig-iron market, ordinary forge quality being quoted at from 65s. per ton. House coal is steadier, but manufacturing fuel is in sluggish demand.

THE PROPOSED WINDING-UP OF THE BLAKELEY HALL COLLIERY COMPANY.—An adjourned meeting of shareholders was held at the company's offices, Birmingham—the Chairman, Mr. R. M. Carter, M.P., presiding. The meeting was held with a view of further considering the proposal for winding-up the company, and, after considerable discussion, it was resolved to further adjourn the meeting, with a view of allowing further negociations with debenture holders. Subsequently a joint meeting of the debenture holders and share holders of the company was held at the Queen's Hotel. The meeting was called by circular, issued at the urgent request of a number of those interested in the company, by the Chairman, and was held with a view of considering whether arrangements could not be made which would prevent the inevitable loss which would result from a forced sale of the property. The meeting was private. Mr. Carter was voted to the chair, and there was a long friendly discussion as to the course most desirable to be adopted, in the interests alike of debenture and share holders. Ultimately, although no resolution was passed, a line of action was mutually agreed upon, which if carried out will, we are informed, probably prevent the sale.—[Mr. R. M. Carter, M.P., the Chairman of the company, since states that the result of the joint meeting of shareholders and debenture holders in the company, held at Birmingham, on Tuesday, has destroyed all hopes of a compromise, and led the preference shareholders to the conclusion that the property must be sold.]

THE SCOTCH MINING SHARE MARKET—WEEKLY REPORT AND LIST OF PRICES.

During the past week the market has been unusually quiet. In shares of iron and coal concerns little alteration, but the tendency seems to be upwards. Lochore and Capledrae, and Shotts Iron (new), have, however, fallen ⅜ each. Cairntable, and Omoa and Cleland are higher. Chapel House Colliery is 4½, sellers. North Lonsdale Iron and Steel, 6 to 5 dis. United Bituminous Collieries, ⅛ to ¼. The few transactions in foreign copper concerns have generally been about late prices, sometimes a shade less. Home undertakings have been neglected, but are steady all round. Gunnislake (Clitters) is lower at 2½, sellers. Killifreth, ¾ to 1, firm. Van, 29, sellers. In shares of gold and silver companies, the chief feature has been a "spurt" of about 11s. 6d. on Emmas; but the highest price has not been maintained. Richmonds, ⅛ lower for the week. Australasian Mines, ½ to ¾. Colorado Terrible Lode, 2⅛. Don Pedro North del Rey, ⅝, sellers. Flagstaff, 1¼. Rica, 3s. to 4s. Almada and Tirito, 11s. 3d., sellers. In shares of oil companies, Young's Paraffin, ⅝, up; and Uphall, ½, down; others unaltered. In Miscellaneous, beyond an improvement in Lawes's Chemical, at 7¾ to 7½, there is hardly any change to notice. Milner's Safes have been done at 10 13-16ths. Langdale's Chemical is firm at 5¼ to 6. The Bank rate of discount has been again moved up to-day—namely, to 4 per cent, being ½ per cent. up. The appearance of the market continues favourable to the expected improvement all round in the value of home iron, colliery, and mining enterprises; but for the time, shares in foreign undertakings, almost all kinds, are more freely offered than enquired for. A detailed list of the several days' business follows.

On THURSDAY last the market was very quiet. Benhar (all paid), done at 10⅝, closing 10⅝ to 10¾. Emma, good, at 23s. 3d. to 24s. Marbella, done at 77s. 6d. and 78s., closing 77s. 6d. to 78s. 6d. Monkland, ordinary, lower, at 48s. to 50s. Omoa and Cleland, done at 53s. and 52s., closing 53s. to 53s. 6d. Richmond, 9¼ to 9¾. Shotts, new, 8 to 8¼. Tharsis shares done at 20⅞, closing 20 13-16ths to 20 15-16ths; new shares, 14 to 14¼. West Maria, 6s., sellers.

On FRIDAY the market was dull. Benhar (all paid), 10⅝ to 10¾; new shares, 5¼ to 5⅜. Ebbw Vale, done at 15, closing 15 to 15⅛. Emma, 24s. to 26s. Great Laxey, 16½ to 17⅛. Killifreth, ¾ to 1. Langdale's Chemical, 5½, buyers. Lawe's Chemical, higher, at 7¼ to 7½. Marke Valley, 3 3-16ths, sellers. Marbella, done at 78s. Richmond, done from 9¼ to 9⅜, closing 9 1-16th to 9 3-16ths. Santa Barbara (late Pari), 13s. 3d. to 18s. 3d. Shotts, new, 8 to 8¼. Tharsis, done at 20¾, closing 20⅝ to 20⅞. Wheal Kitty (St. Agnes), 3¼, sellers. Young's Paraffin, done at 5¾, closing 5¼ to 5¾.

On SATURDAY the market was very dull. Benhar (all paid), done at 10⅝ and 10¾, closing 10 11-16ths to 10¾. Emma, done at 25s., closing 25s. to 27s. Gold Run, 18s., sellers. Gunnislake (Clitters), 2½, sellers. Lochore and Capledrae, 6½, sellers. Langdale's Chemical, higher, at 5⅝, buyers. Nant-y-Glo and Blaina, preferred, 37, sellers. North Lonsdale Iron, 5¼ to 5⅜ dis. Richmond, done at 9¼, closing 9⅜ to 9¾. Shotts, new shares, done at 8, closing 7⅞ to 8. Scottish Australian Mining, 25s. 6d. to 26s. 6d. Tharsis, 20¾ to 20⅞. Scottish Wagon, new shares, done at 86s. 6d.

On MONDAY very little business was done. Arniston remain at 7; the meeting is announced for Nov. 8, at Edinburgh. Almada and Tirito lower at ⅝, sellers. Canadian Copper Pyrites 33s. to 34s. 6d. Don Pedro North del Rey, ¾, sellers. Emmas higher, done at 22s. 6d. and 24s., closing 24s. to 25s. Glasgow Caradon done at 28s. 3d., closing 28s. to 28s. 6d. Javali, ¾, sellers. Lochore and Capledrae lower at 5⅞, sellers. Richmonds opened at 9¾, but advanced to 9⅝, closing 9⅝ to 9¾. Shotts (new shares) done at 7⅞. Santa Barbara (late Pari), good at 14s. 6d. to 19s. 6d. Tharsis done at 20¾, closing 20⅝ to 20⅞. Yorke Peninsula (ordinary), 6s. 3d. to 10s. Scottish Wagon (all paid), 10⅞ to 11.

On TUESDAY there was no improvement in the amount of business transacted. Benhar (all paid), 10⅝ to 10¾; new (5*l.* paid) shares, 5⅛ to 5¼. Canadian Copper Pyrites done at 33s. and 32s. 6d., closing 32s. to 33s. Emmas done at 24s., closing 23s. 6d. to 24s. 6d. Glasgow Caradon done at 28s., closing 27s. 6d. to 28s.; new shares done at 18s. Huntington, 27s. to 29s. Richmonds done at 9¼ and 9⅜, closing 9¼ to 9⅜. Tharsis done at 20¾, closing 20¾ to 20⅞; new shares done at 13 15-16ths. Young's Paraffin done at 6, closing 6 to 6⅛. Scottish Wagon (all paid), 10⅞ to 11.

On WEDNESDAY the market again quiet. Benhar (all paid), 10⅝ to 10¾; new (5*l.* paid) shares, 5⅛ to 5¼. Cairntable done at 10⅝. Canadian Copper Pyrites, 30s. to 32s. Chapel House Colliery, 5¼, sellers. Don Pedro North del Rey, ⅝, sellers. Emmas, 31s. 6d. to 33s. 6d. Huntington done at 29s., closing 28s. to 29s. Omoa and Cleland done at 53s. Richmonds done at 9¾, closing 9 5 16ths to 9¾. This week's run is announced by cablegram from the mine at $42,000. "Stopes looking well." Scottish Australian done at 1 5-16ths, closing 1¼ to 1⅜. Tharsis done at 20⅞, closing 20¾ to 20⅞. Young's Paraffin done at 6¼, closing 6 to 6⅛. Uphall Oil, 2¼ to 2½. Van, 29, sellers. Scottish Wagon (all paid), 10⅞ to 11.

The following are this week's prices of some stocks, shares, &c., occasionally dealt in on this market, but not quoted (with few exceptions) on any of the Scotch Stock Exchanges:—Iron, Steel, and Coal Companies: Andrew Knowles and Sons, 22⅛ to 22⅜; Bolckow, Vaughan, and Co. "B," 44½ to 45; Britannia Ironworks, 10; Cardiff and Swansea Steam Coal, 3 to 3½; Chapel House Colliery, 3⅜ to 4½; Great Western Colliery, 11 to 12; Lehigh and Wilkes Barre 6 per cent. first mortgage, guaranteed by Central Railroad of New Jersey (U.S.), 94 to 95; Llynvi, Tondu, and Ogmore Coal and Iron, 23½ to 24½; Mersey Steel and Iron, 4⅞ to 5½; Mwyndy Iron Ore, 2 to 2¼; Newport Abercarn Colliery, 3½ to 4; New Sharlston Collieries, pre., 3 to 4; Powell's Llantwit Colliery, 1 to 2; Scottish Australian Mining, new shares, 5-16ths; South Cleveland Ironworks, 2½ to 3; Ulverstone Mining, 10½ to 11; United Bituminous Collieries, ⅛ to ¼; West Cumberland Iron and Steel, 8¾ to 9¼.—Copper, Lead, Tin, &c., Companies: Bedford United, ¾ to 1; Bensberg Lead, 3½ to 4; Bowden Hill Manganese, ⅜; Copiapo Mining, 3½; Court Grange Lead, ¾; Drake Walls, 2 to 2¼; East Caradon, 1¾; Elgar, ¾ to 1; Great Laxey, 16 to 16⅛; Gt. West Van, ¼ to ½; Gunnislake (Clitters), 2½ sellers; Lady Constance Lead, ¼ to 1; Marke Valley, 2⅞ to 3¼; New Consols, 1 to 1¼; New Pembroke, ⅜ to ⅝; New Quebrada, 3¾; North Hendre Lead, 3 to 4; Prince of Wales, 4s. to 5s.; Ply-Rimmon Lead, ⅜ to ½; Rio Tinto, 6⅛; Snowbrook, 4½ to 5; South Roskear, 4½ to 5½; West Esgair Lle, ⅜ to 1; West Maria and Fortescue, ¼ to ⅜; West Poldice, 19; Wheal Mary Hutchings, ⅛; Yorke Peninsula Mining 15 per cent. guaranteed preference, ⅞; Yorkshire Mining, 3-16ths to ¼.—Gold and Silver Companies: Almada and Tirito, ¾ to ⅝; Australasian Mines Investment, ¼ to ⅜; Battle Mountain, 1 to 1½; Chontales Consolidated, ⅜ to ⅝; ditto new shares, ⅜: Colorado Terrible Lode, 2½; Don Pedro North del Rey, ⅝; Eberhardt and Aurora, 7½ to 8; Exchequer, ⅜; Frontino and Bolivia, 1 to 1¼; I.X.L., 3; Javali, ½ to ⅝; Pestarena United, ⅛ to ¼; Port Phillip and Colonial, ¾ to 1; Rica, 3s. to 4s.; Santa Barbara (late Pari), 18s. to 20s.; South Aurora, 7-16ths; Tecoma, ⅝; United Mexican, 2⅞; Welsh, "The," Gold, ¼; Winter's Freehold, 2 to 5.—Oil Companies: Flintshire Oil and Cannel, 1 to 1⅛; Midlothian, ¼; West Calder, 1 to 1¼.—Miscellaneous Companies: Aberdeen Lime, 7 to 8; Bede Metal and Chemical, 3¼ dis.; Congleg Slate and Slab, 9½ to 10½; General Sewage and Manure, 4½ to 5⅛; Langdale's Chemical Manure, 5½ to 6; Lawe's Chemical, 7¼ to 7½; Native Guano, 2¾; Newcastle Chemical, 3½ dis.; North Cornwall Kaolin, ⅞ to 1; Phospho-Guano A, 7; ditto B, 2; Thames Chemical, 5; and subjoined are the latest prices, &c., of those quoted on the Stock Exchanges:—

Capital. Per share.	Paid up.	Dividends. Rate per cent. per annum. Previous.	Last.	Description of shares.	Last price.
				COAL, IRON, STEEL.	
£10	£6	£12½	£10	Arniston Coal (Limited)	7
10	10	14	9	Benhar Coal (Limited)	10⅝
10	5	14	9	Ditto	5¼
100	35	12½†	12½	Bolckow, Vaughan, and Co. (Lim.) A.	50
10	10	10	10	Cairntable Gas Coal (Limited)	10⅝
10	10	5	nil	Chillington Iron (Limited)	5
32	29	7	½†	Ebbw Vale Steel, Iron, and Coal (Lim.)	15⅛
10	4	nil	nil	Fife Coal (Limited)	4
10	10	—	—	Glasgow Port Washington Iron & Coal (L)	3¾
10	10	—	—	Ditto Prepaid	3⅞
10	10	—	—	Lochore and Capledrae (Limited)	5⅞
10	10	5s 7d‖	5	Marbella Iron Ore (Limited)	78s.
10	10	5	nil	Monkland Iron and Coal (Limited)	2½
10	10	7	7	Ditto Guaranteed Preference	124s.
100	100	nil	nil	Nant-y-Glo & Blaina Ironworks pref. (L)	37s.
10	4	15	nil	Omoa and Cleland Iron and Coal (Lim.)	53s.
1	1	15	12½	Scottish Australian Mining (Limited)	1⅜
50	50	5	5	Shotts Iron	77½
10	8	5	5	Ditto New, issued at 2½ prem.	7⅞
				COPPER, SULPHUR, TIN.	
10	7	—	—	Canadian Copper Pyrites (Limited)	32s.
10	10	—	—	Ditto All paid	6½
10	7	20s‖	20s‖	Cape Copper (Limited)	34
2	2	—	—	Dunsley Wheal Phœnix Tin (Limited)	2s.
1	1	12½	12½	Glasgow Caradon Copper Mining (Lim.)	28s.
1	18s.	12½	12½	Ditto New	18s.
10	9	—	5	Huntington Copper and Sulphur (Lim.)	29s.
25s.	23s.	—	—	Kapunda Mining (Limited)	⅛
4	4	—	—	Panulcillo Copper (Limited)	1¾
10	10	nil	nil	Russian Copper (Limited)	2¾
10	10	25	25	Tharsis Copper and Sulphur (Limited)	20⅞
10	7	25	25	Ditto New	13 15-16
1	1	—	—	Yorke Peninsula Mining (Limited)	⅛
				GOLD, SILVER.	
20	20	—	—	Emma Silver Mining (Limited)	33s. 6d.
10	10	—	—	Flagstaff Silver Mining (Limited)	1¼
5	5	—	—	Last Chance Silver Mining (Limited)	1
5	5	—	35	Richmond Mining (Limited)	9⅜
				OIL.	
10	7	2½	5	Dalmeny Oil (Limited)	5½
10	10	—	—	Uphall Mineral Oil (Limited)	2¼
10	8½	5	5	Young's Paraffin Light & Mineral Oil (L)	6¼
				MISCELLANEOUS.	
50	25	16	16	London and Glasgow Engineering & Iron Shipbuilding (Limited)	22
20	11½	—	—	Peruvian Nitrate (Limited)	11⅝
10	10	8	5	Scottish Wagon (Limited)	10⅞
10	4	8	5	Ditto New	86s. 6d.

† Interim. ‖ Per share.

Last day for this account Oct. 26; settling day, Oct. 29.

J. GRANT MACLEAN, Stock and Share Broker.

NOTE.—The above list of mines and auxiliary associations is as full as can be ascertained, Scotch companies only being inserted, or those in which Scotch investors are interested. In the event of any being omitted, and parties desiring a quotation for them and such information as can be ascertained from time to time to be inserted in this list, they will be good enough to communicate the name of the company, with any other particulars as full as possible.

Post Office Buildings, Stirling, Oct. 21.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

Oct. 21.—Work is going steadily on at the lead mines in the south-western part of Derbyshire, and but few searches are being made for ore in the county. Such is not the case, however, with respect to coal mining, for several new and large collieries are being opened out that will add largely to the productive power of the southern portion of the Midland coal field. The men who were recently employed at the pits belonging to the Butterley Company are still on strike, and must have lost considerably by their endeavours to maintain wages beyond a point that would not leave any profit to their employers. At the Annesley Colliery, near Mansfield, there has also been a dispute with respect to wages, and it appears that the average wages paid to the stallmen have been 10s. per day of eight hours, and to the ordinary men employed by them 6s. a day. There is no doubt but the "butty" system is a fertile source of dispute, for it is the reverse of fair to the workman. In Yorkshire the system is not tolerated, so that every man is paid so much a ton or so much a yard, so that there is no intermediary between him and the owner to mulct him of a part of his wages. The Coal Trade continues very fair, particularly as regards households, and a considerable tonnage is being sent to London from Clay Cross, Langley Mill, Tibshelf, and Staveley. Scarcely any, however, has been forwarded of late from Codnor Park, owing to the pits being idle from the strike. Steam coal has undergone little change, and is in seasonable request. Sinking operations are being pushed forward in several parts of Derbyshire and to the south of it.

Of late there has been some improvement in several branches of the Sheffield trade, which is now in a healthier state than it has been for a considerable time past. The heavy armour plate mills have been running very well, and a fair amount of business has been done in those of a lighter description. Bessemer is in rather better request, and there has been some improvement in the demand for rails of that material. In ordinary rails there has been no material alteration, the production being limited. Cutters are better employed than they have been, and the same is the case with the file makers. The coal trade of South Yorkshire is still tolerably good, and the colliers, as a rule, appear to have plenty to do. A considerable number, however, are standing out against a proposed alteration of wages at one place, and some efforts made to bring the matter to a termination have not as yet been successful. Referees chosen on both sides have been unable to agree—excepting indeed to differ.

The great event of the week has been a charge of defalcation preferred by some members of the Miners' Association against the officials. Auditors have reported that the books show a deficiency of upwards of 4500*l.* unaccounted for. On the other hand, it is asserted that there is no actual deficit, but that the books have not been accurately kept, owing to the large amount of work that was thrown on the officials last year when the strike took place. On Tuesday a meeting on the subject was held in the Mechanics' Hall, Barnsley, which was largely attended. From the speeches delivered it appears that during the present year there has been a marked falling off in the number of members of the association, and also in the revenue. A vote of want of confidence in the officials was put to the meeting and agreed to. Similar meetings are to be held throughout the whole of South Yorkshire.

COLLIERY ENTERPRISE.—Some ten years ago a Birmingham company, with Mr. John Jaffray, principal proprietor of the *Birmingham Daily Post*, at its head, bought the Fence and Orgreaves Collieries, near Rotherham, which had hitherto been carried on with no success. Mr. L. W. Bates, formerly of Derby, was appointed secretary and manager, and the concern flourished exceedingly. The same gentleman mainly, under the name of the "Rother Vale Collieries Company (Limited)," have acquired the adjacent mineral property at Treeton, raising the total acreage to about 3000, and the daily yield when in full operation, to about 2000 tons. On Wednesday week the first sod of the new colliery was cut by Mrs. Jaffray, to whom, in the name of the directors, Mr. Bates handed a very handsomely ornamented spade and barrow, and she cut a sod, placed it in the barrow, and wheeled it along a plank in so efficient a manner that a gentlemen who seconded a vote of thanks observed that it was some satisfaction to know that if manual labour should fail them they could depend upon the ladies coming to their assistance and rescue. Mr. Jaffray, in reply, said the company were prepared, as at their other collieries, to provide good houses, with every practicable provision to preserve the purity of domestic life, schools, and spiritual instruction, and called upon the men to co-operate with them. Mr. E. Hedley, of Derby, is the principal engineer.—*Derby and Chesterfield Reporter.*

CALCINING FURNACES.—Between two furnaces of ordinary construction Mr. J. T LOCKEY, of Northwich, proposes to place the reverberatory furnace. The gases from this furnace by means of a steam jet are conveyed under a drying floor or an evaporating pan till sufficiently cooled, when they are allowed to escape into the air. The advantages being consumption of smoke, economy of fuel, and (by preventing the direct radiant heat from striking the evaporating pan) less wear and tear of the latter.

PRODUCTION OF AMMONIA.

An ingenous and economic method of producing ammonia has been suggested by Mr. F. MAXWELL-LYTE, of Cité du Retiro, Paris, and although it appears that some minor difficulties have to be overcome before the discovery can be utilised on the large scale, he has already done enough to prove that the process is quite capable of development. The essential feature of the invention is the production of the ammonia by causing nascent hydrogen to act upon nitrogen in presence of one of the triad or pentad elements. He produces, first of all, a combination or alloy of one of the more easily oxidisable metals, such as potassium, sodium, one of the earthy alkaline metals, or even zinc, with one of the triad elements, such as bismuth, arsenic, phosphorous, or tin, it being understood that the alloy should be of such chemical or physical constitution as to be able to decompose water or watery vapour at a moderate temperature, not exceeding that of incipient redness. An alloy of antimony and sodium or potassium, for instance, which decomposes water at ordinary temperatures, and rapidly at the boiling heat, is of this nature. Such an alloy may, for convenience, be produced by calcining oxide of antimony, or the powder of that metal, with carbonate of soda or potassa, and enough charcoal or organic matter to effect the reduction, or with any proper reducing material. If the carbon or organic matter be in sufficient excess it retains the reduced metals in an amorphous and porous state, fit to be rapidly acted on in the subsequent treatment. He now places this reduced alloy or combination in a proper receptacle, and exposes it to the action of a mixture of aqueous vapour and nitrogen, when the sodium or potassium of the alloy uniting with the oxygen of the water produces hydrogen, which in its nascent state combines with the nitrogen present and produces ammonia, arsenide of sodium, phosphide of sodium, bismuthide of sodium. Tin and sodium produce similar results with nitrogen and aqueous vapour, not all, however, to the same extent. The process being accelerated by heat it is advisable to maintain the material at a temperature of from 100 to 400 centigrade (212° to 750° Fahr.) during the passage of the nitrogen and aqueous vapour. The sodium may be here replaced by the other alkaline metals, alkaline-earthy metals, or by zinc, or by a mixture of them.

It will be readily understood that the reaction here employed, M, being a triad or pentad element, and R the oxidisable metal) may be represented by the general formula—$2(MR^3) + 2N + 3(H^2O) = M^2 + 6(RO) + 2(NH^3)$. The presence both of the triad or pentad element, and of hydrogen in the nascent form is essential to the process. It is evident that in this reaction it may also be presumed that there is formation of a hydrogen compound of the triad or pentad, which is subsequently decomposed in contact with the nitrogen present, as for instance, the compound of triad antimony with hydrogen. The reaction in this case would not be represented as above, but would be thus for the case of antimony—$Sb\,H^3 + N = NH^3 + Sb$, or generally $M\,H^3 + N = M + N\,H^3$, but in this case it is none the less certain, but we have equally as before the pesence of nascent hydrogen with nitrogen, and the simultaneous presence of a triad, which combination of substances forms the basis of the present application, the presence of aqueous vapour being merely an accessory requisite for producing nascent hydrogen in certain cases. In order to regenerate the metallic alloy or combination, and so reproduce the ammonia-producing compound, it is sufficient to expose the same to a red-heat under the action of a reducing agent, gaseous liquid, solid, inorganic, or organic, for instance, if enough carbon still remains in the compound simple heating to redness will regenerate it.

That the perfecting of such a process as the above would be of immense general advantage cannot be questioned, since it is acknowledged that were ammonia obtainable in large quantities, and at an almost nominal cost, as it doubtless would be by Mr. Maxwell-Lyte's method of producing it, its application would be very largely extended, and that to in a manner which would benefit all branches of industry. Mr. Maxwell-Lyte's further researches in the same direction will be watched with much interest.

COMBINED ENGINE AND BOILER WITH AIR-COMPRESSING APPARATUS.

To facilitate the compression of air, chiefly for use with rock-drilling machinery, an invention has been patented by Messrs. JOHN RICHARDSON, of Lincoln, and C. J. BALL, of New Bridge-street, which embraces an improved arrangement of engine and boiler, with air and gas compressing apparatus in combination, and consists in fitting the engine upon a fountain plate or bed, and below the barrel of the boiler when a horizontal boiler is used with the shafts and other gearing in proximity, so as to be independent of such boiler, which rests fore and aft upon the foundation. The smoke box end rests and is bolted down upon the steam cylinders, the fire-box end resting direct upon the foundation, which is preferably hollow, and forms a feed water tank. The engine proper is so fitted that it operates upon air or gas compressing apparatus fitted as part of the structure, and from which air or gas compressing apparatus machinery or appliances can be driven. The combination is applicable to the vertical type of boilers in a corresponding manner. The engine can be driven to work machinery when disconnected from the air-pump.

The air-compressing apparatus is that invented by Mr. Ball about a year since, the arrangement thereof being necessarily made in conformity with the class of engine, boiler, and foundation employed. The apparatus consists mainly of a pumping cylinder open at one end, and containing a piston actuated directly by a connecting rod driven by a crank formed upon a suitable crank shaft carrying a heavy fly-wheel. The air or gas cylinder is fixed to the bed plate, also the cylinder of a steam-engine, which causes the fly-wheel to revolve by means of a connecting rod working upon another crank formed upon the same aforesaid shaft. The pump cylinder is surrounded by a cistern, which is kept filled with cold water, and the water having free access to the inside and outside of the cylinder and piston they are kept full, and prevent the ill effect of the heat given out by the air during compression. The closed end of the pump is fitted with inlet and outlet valves (which may also be surrounded by a water cistern) so arranged that little or no clearance is allowed between them and the pump piston when the latter is at the end of its stroke, and nearly the whole of the useful effect of the pump is thus utilised. The bearing of the connecting rod which drives the piston may be adjustable.

It is explained that in order to absorb the heat evolved by the compression of the air the opening to the inlet valve is in the form of a tube, and water in the form of spray is forced with the inflowing air into this tube, such jet disseminating and carrying with it a sufficient quantity of water, which is allowed to fall in front of it (or to be raised by it from a small depth) through a pipe, or pipes, the end of which is immediately in front of the jet and at right angles to it. By this arrangement the inflowing air is saturated with moisture in a fine state of division. The advantages claimed for the invention are that the whole machinery is made much more compact so as to occupy the minimum space; that the erection of the machinery is much facilitated, both on the works of the manufacturers and on its subsequent re-erection when being set to work, all pipe joints steam and water connections being included within and upon the foundation plate; and that the machinery is more under control, and less expensive to work.

COMPRESSED AIR.—Mr. C. D. ABEL, of Chancery-lane, has patented (for Léon Ribourt, of Altorf), some improvements in locomotive engines worked by compressed air, and in pressure regulating apparatus for the same, such apparatus being also applicable for regulating the pressure of steam or gases employed in other engines. This invention relates to locomotives worked by compressed-air provided with pressure regulating apparatus, which is applicable when steam or gases under pressure are employed to produce motive-power. The locomotive is like one of ordinary construction, having instead of a boiler a large and strong reservoir, which is charged with compressed-air, and having large cylinders

so as to work with moderate pressure under that of the partly exhausted reservoir. Between the main reservoir and the cylinders are placed the regulating apparatus and a small subsidiary reservoir in the course of the pipe from the regulator to the cylinders. The regulator consists of two pistons connected together, fitted to work in a cylinder open at one end to the air and at the other end communicating with the subsidiary reservoir, while the middle space between the two pistons communicates with the main reservoir, and also by side holes with the subsidiary reservoir, these side holes being governed by a slide attached to the pistons. The pistons are pressed inwards by the atmosphere and by an adjustable spring, and outwards by the fluid at the working pressure in the subsidiary reservoir, and accordingly as the latter pressure exceeds or falls short of the atmosphere pressure aided by the spring, so the slide covers or uncovers more or less the holes in the cylinder and thus, notwithstanding considerable variation of pressure in the main reservoir, the working pressure in the subsidiary reservoir is maintained constant, or nearly so, and within limits may be varied by altering by an adjusting screw the force of the spring.

ROCK-DRILLS.—Mr. J. K. GULLAND, of Westminster Chambers, Victoria-street, has patented an invention which consists in applying a rotary engine direct on the tubular spindle of a rotating rock-drill, so as to cause it to revolve while the spindle can slide through the rotating piston or hollow shaft of the engine, and in pressing forward the drill spindle while it bores, or retracting it from the hole by air or steam pressure acting on a piston in a cylinder, which piston is mounted with a thrust bearing on the end of the drill spindle. For supplying the drill with water a pipe is passed through the end of the cylinder in which the advancing piston is fitted, and enters the hollow drill spindle through packing. Instead of thus arranging the drill in the axis of the engine, it may be mounted at an angle thereto, and passed through a sleeve driven by bevil gearing.

RECORDING STEAM GAUGES.—The improvements in recording steam gauges invented by Mr. M. B. EDSON, of New York, consist in combining with a circular horizontal base a diaphragm spring, with a connecting rod, record marker, and other parts, for recording varying pressures of fluids or liquids, and for defining the time every change occurs therein. He also employs clock or chronometer mechanism, and a chart belt or ribbon of graduated paper, whereby a continuous record of varying pressures may be secured, coupled with the record of intervals of time of their occurrence. He also uses in combination with a recording pressure gauge the elements of an electric circuit closer or breaker, with a sounder for alarm purposes.

PANT-Y-PYDEW (Flintshire).—Special attention has of late been directed to this district, and numerous lengthy articles and letters have appeared in the *Mining Journal*. The best evidence of the intrinsic worth of a property is the returns made. The above company has been in operation for a few months only, and the amount of ore sold has realised upwards of 500*l*., the last sale being 15 tons at a high price, as will be seen on perusal of the Holywell Ticketing List, published in last week's Journal. It is stated that there are many points of great value being developed, and the amount of ore already discovered will enable the company to increase their monthly returns to a considerable extent. In next week's Journal will be published a surface plan of this district, together with a transverse section of the same, from Mr. Thomas Spargo, of Cornhill, who intends inspecting the district early in the ensuing week.

Petitions have been presented to the Court of Chancery for the winding-up of the General Register and Meter Company (Limited), Goitrewen Llangermech Merthyr Smokeless Steam Coal Company (Limited), and the Welsh Freehold Coal and Iron Company (Limited).

HOLLOWAY'S OINTMENT AND PILLS.—Disease is common to the palace and the cottage, and the best remedies are available alike by the tenants of each. Holloway's well-esteemed Ointment and Pills can be obtained everywhere at a moderate cost, and prove themselves the poor man's best friend when he is simply ailing, or worse still when the severity of his sufferings forbids the pursuance of his usual employment. Gout, rheumatic gout, rheumatism, lumbago, nervous affections, neuralgia, sciatica, stitches in the side, and pains in the joints yield to Holloway's treatment. In these two medicaments are combined all that science and invention can combine for the relief of suffering humanity, and the restoration of the afflicted to ease, strength, and activity.

RICKARD AND GLEDHILL.
MINING ENGINEERS AND ASSAYERS,
3, BLOMFIELD STREET, LONDON WALL, E.C.,

IMPROVED BORING APPARATUS.

THE ATTENTION of GENTLEMEN and ENGINEERS about to SEARCH for MINERALS or WATER is solicited to the METHOD provisionally protected by Mr. BOSWORTH. By this system continuous solid cores are brought to the surface without the use of percussion, or of a forced current of water—thus the sides of the bore are but little liable to damage, and a great saving of tubing thereby made.
By permission of Sir A. B. C. BIXIE, Bart., and of C. S. BURNABY, Esq., the MACHINES MAY BE SEEN IN FULL WORK at MARKET BOSWORTH, and at EVINGTON, LEICESTER.
Application to be made to Messrs. ROLLESTON and SOADY, 32, Piccadilly Circus, London, and Greyfriars, Leicester; or to—
MR. J. A. BOSWORTH, HUMBERSTONE, LEICESTER.

THE ROCK-BORING CONTRACT COMPANY.
DARLINGTON'S PATENT ROCK-BORING MACHINERY.
OFFICES,—2, COLEMAN STREET BUILDINGS, MOORGATE STREET, LONDON.
FOR TUNNELLING, DRIVING LEVELS, CROSS-CUTS, AND SINKING SHAFTS.

THE TAVISTOCK IRONWORKS, ENGINEWORKS FOUNDRY, AND HAMMER MILLS,
TAVISTOCK, DEVON.
NICHOLLS MATHEWS, AND CO.
ENGINEERS, BRASS AND IRON FOUNDERS,
BOILER MAKERS AND SMITHS.
MAKERS OF
CORNISH PUMPING, WINDING, AND STAMPING ENGINES; STEAM CAPSTANS AND CRUSHERS; WATER-WHEELS; PUMP-WORK; SHOVELS, AND HAMMERED IRON FORGINGS OF EVERY DESCRIPTION.
Also of SPUR, MORTICE, MITRE, BEVIL, and other WHEELS, of any diameter up to 12 feet, made by Scott's Patent Moulding Machine, without the aid of patterns, and with an accuracy unattainable by any other means.
MACHINERY for FOREIGN MINES carefully prepared.
SECONDHAND MINING MACHINERY, in good conditon, always on sale moderate prices.

THE PATENT GUNPOWDER COMPANY
(LIMITED).
NOTICE TO MINE CAPTAINS AND ENGINEERS OF COLLIERIES AND GRANITE MARBLE QUARRIES.
The POWDER of this company can NOW BE SUPPLIED.
PERFECT SAFETY IN USE AND STORE.
FREEDOM FROM SMOKE.
Sample charges for trials and agencies granted on application to the SECRETARY at the offices of the company,—
6, GREAT WINCHESTER STREET BUILDINGS, LONDON.

CO-OPERATIVE CREDIT BANK,
MANSION HOUSE CHAMBERS,
11, QUEEN VICTORIA STREET, E.C.
First issue of capital: £500,000, in subscriptions of £10 and upwards.
Interest in lieu of dividend 18 per cent. per annum, paid monthly.
Current accounts opened, and 5 per cent. interest allowed on the minimum monthly balances.
CHEQUE BOOKS SUPPLIED.
The Bank transacts every description of sound financial business. Book-keeping in the hands of the subscribers, and a quarterly balance sheet issued by auditors appointed by them, independent of the management.
For particulars apply to— R. B. OAKLEY, Manager

RAILWAY CARRIAGE COMPANY (LIMITED).—
ESTABLISHED 1847.
OLDBURY WORKS, NEAR BIRMINGHAM.
MANUFACTURERS of RAILWAY CARRIAGES and WAGONS, and EVERY DESCRIPTION of IRONWORK.
Passenger carriages and wagons built, either for cash or for payment, over a period of years.
RAILWAY WAGONS FOR HIRE.
CHIEF OFFICES,—OLDBURY WORKS, NEAR BIRMINGHAM.
LONDON OFFICES,—7, GREAT WINCHESTER STREET BUILDINGS.

THE BIRMINGHAM WAGON COMPANY (LIMITED) MANUFACTURE RAILWAY WAGONS of EVERY DESCRIPTION, for HIRE and SALE, by immediate or deferred payments. They have also wagons for hire capable of carrying 6, 8, and 10 tons, part of which are constructed specially for shipping purposes. Wagons in working order maintained by contract.
EDMUND FOWLER, Sec.
WAGON WORKS,—SMETHWICK, BIRMINGHAM.
*** Loans received on Debenture; particulars on application.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACTS, 1862 and 1867, and of the PARBOLA MINING COMPANY (LIMITED). — The Registrar of this Court has appointed SATURDAY, the 30th day of October instant, at Eleven o'clock in the forenoon, at the Registrar's Office, at Truro, to SETTLE the LIST of CONTRIBUTORIES of the above-named company, now made out and deposited at the said office. FREDERICK MARSHALL, Registrar.
Dated Registrar's Office, Truro, the 20th day of October, 1875.

VALUABLE MINING SETTS, MACHINERY, AND PLANT, IN ST. IVES, CORNWALL, FOR SALE.

MR. A. BERRYMAN has been instructed to OFFER FOR SALE, BY AUCTION, on the Mine, on Wednesday, the 27th October instant, at Two o'clock in the afternoon, as a going concern, the WHOLE of the VALUABLE and EXTENSIVE MINING SETTS, called

ST. IVES CONSOLS,

Situate in the parish of St. Ives, in the county of Cornwall, together with the WHOLE of the excellent PLANT and MACHINERY thereon, including:—
ONE 60 in. PUMPING ENGINE, with TWO 10 ton BOILERS.
ONE 26 in. STAMPING ENGINE, with two large fly-wheels, wrought iron axle and sweep rod, with ONE 10 ton BOILER.
ONE 16 heads AXLE, and THREE 12 heads ditto, together 52 heads, with lifters, &c., complete.
ONE 22 in. WINDING ENGINE, with cage attached, and ONE 8 ton BOILER.
ONE 20 in. WINDING ENGINE, with cage attached, and ONE 10 ton BOILER.
ONE 6 in. horizontal ENGINE, with vertical multitubular BOILER, with an 8 fm. 4 in. working lift attached.
9 fms. 19 in. pitwork; 27 fms. 12 in. ditto; 70 fms. 8 in. ditto; and 107 fms. 7 in. ditto, with H pieces, doorpieces, and working barrels, &c., complete; 20 fms. wood rods, 30 fms. 10 in. ditto, 30 fms. 9 in. ditto, 30 fms. 8 in. ditto, and 70 fms. 6 in. ditto, with strapping plates, &c., to match; 2 balance bobs, balance rods, &c.; 50 fms. 2½ in. round iron rods, at surface, with joints, &c., complete; about 800 fms. of underground railroad, with tram wagons, &c.; all the tin floors, together with the excellent and lofty woodsheds covering the same; about 900 fms. ¾ in. chain, kibbles, &c.; 21 large centre-head buddles, 6 square ditto; 124 self-acting and other tin frames; Brunton's patent calciner, 12 ft. bed, with water wheel and driving gear; 3 plunger lifts for pumping slime; 4 water wheels for driving dressing machinery; a large number of tin sieves; and all the necessary dressing tools requisite for a large mine.
Also, the RICH TIN LEAVINGS throughout the mine, being the accumulations of many years, during the greater part of which this has been one of the largest tin-producing mines in the county. The setts are held upon favourable terms, are large in area, and comprise rich and productive mineral ground. The water charges are easy, and the mine is favourably situated for the supply of material.
ST. IVES CONSOLS has paid in profits to the adventurers about £140,000; and, coupling this with the fact that a large proportion of the ground included in the setts remains unexplored, a rare opportunity is now offered to an enterprising company for mining investment.
For further information and to view, apply on the Mine; to Capt. JOHN GILBERT, Capt. APLIN, the Purser, or to the Auctioneer, 28, Clarence-street, Penzance.
Dated 11th October, 1875.

OCTOBER 29, 1875.

AN excellent TIN MINE SETT, with all the MACHINERY and MATERIALS, FOR SALE, IN LIQUIDATION, with consent of the Mortgagee.

MR. H. V. NEWTON (Auctioneer, Valuer, &c., Camborne, Cornwall) is instructed to SELL, BY AUCTION (IN ONE LOT, AS A GOING CONCERN), on Friday, the 29th inst., at Twelve o'clock, noon, precisely, at the Account-house, on the Mine, all that extensive and valuable TIN MINE SETT, known by the name of

THE NEW ST. BLAZEY TIN MINE (LIMITED),

Together with all the MACHINERY and MATERIALS thereon, viz.:
A 30 in. rotary STEAM PUMPING AND DRAWING ENGINE, 8 ft. stroke in the cylinder and 7 ft. in the shaft, with fly-wheel about 15 tons, and TWO excellent BOILERS, 11 and 9 tons respectively.
A 30 ft. WATER WHEEL, 3 ft. abreast, wrought iron axle, cast-iron rings, with crown and spur wheels and brasses, complete and new.
30 fms. 3 in. iron flat rods; 140 fms. 1¾ in. ditto; 3 balance bobs, with saddles and brasses complete; 2 travelling ditto; 1 angle ditto; 26 pulleys and stands; 25 fms. 9 in. plunger lift, complete; 45 fms. 9 in. drawing lifts (4); 45 fms. 8 in. and 10 fms. 7 in. main rods, with strapping plates, &c., complete; 50 fms. 1½ in. bucket rods; 2 cisterns; 300 fms. galvanised wire; 300 fms. ¾ in. steel wire rope; 4 machine kibbles; 4 winze ditto; 8 arm capstan; 2 shears and pulleys; 120 fms. 4 in. capstan rope; 200 fms. bridge rails; iron stamps' axle, with 12 heads and wood lifters, frame, &c., complete and new; 6 Williams's patent buddles, complete; 4 tin sieves; cast steel borers; 40 in. smiths' bellows; smiths' tools, anvil, screw stock, taps and plates, and rests; set of double, single, and treble blocks; double crab winch; 1 in. and ¾ in. chain; pair yokes; 50 fms. ladders; 7 cwts. tallow; wrought and cast iron; two woodsheds; 20 fms. 3 ft. launders, &c.
The New St. Blazey Tin Mine is situated at St. Blazey, Par, Cornwall, about 1½ mile from the Par Station.
To view the above, apply to Capt. P. RICH, on the Mine; and printed catalogues and any further information may be obtained on application to D. G. GOATLEY, Esq. (the Liquidator), 12, Union-street, Old Broad-street, London, E.C.; Capt. P. RICH, St. Blazey; or to the Auctioneer.
Dated Camborne, Cornwall, October 20th, 1875.

PERKINS BEACH LEAD MINE, NEAR MINSTERLEY, SALOP.

MESSRS. BARBER AND SON WILL SELL, BY AUCTION, at the George Hotel, Shrewsbury, on Friday, the 29th day of October, 1875, at Five o'clock in the afternoon, by order of the Liquidator, in One Lot, and subject to conditions unless previously disposed of by Private Treaty, the

PLANT, MACHINERY, AND OTHER EFFECTS

Lying in and upon the above mine, which is situate in the heart of the Shropshire lead mining district. It adjoins the Tankerville, and lies between that mine and the celebrated Snailbeach sett.
The plant includes THREE STEAM ENGINES, a large quantity of rails, timber, tools, stores, dressing floors, office and other fittings and effects.
The sale will include all such interest as the Liquidator is empowered to dispose of in the leases under which the said mine is held.
Full particulars may be obtained from Mr. E. FIRMSTONE HEATH, Exchange Chambers, Wolverhampton; from Mr. R. D. NEWILL, Solicitor, or Messrs. BARBER and SON, both of Wellington.
N.B.—If the above property is not sold in One Lot, it will be offered in several lots upon the mine at a future day, of which due notice will be given.

STAFFORDSHIRE, NEAR CHEADLE.—FREEHOLD.

A COLLIERY, now being worked; a detached RESIDENCE; and upwards of TWENTY ACRES of LAND, wit possession.

MR. ROBERT REID WILL SELL, BY AUCTION, at the Mart, Tokenhouse-yard, near the Bank of England, London, on Friday, the 5th day of November, at One for Two o'clock precisely, in Three Lots, a valuable FREEHOLD PROPERTY, comprising—

THE HARPLOW COLLIERY,

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The property may be viewed.
Particulars, with plans, may be obtained at the Wheat Sheaf Hotel, Cheadle; and in London of Messrs. HODGKINSON and WATTS, Solicitors, 17, Little Tower-street, E.C.; and of Mr. ROBERT REID, 45, Great Marlborough-street, W.

PINTOR PINDELLO COPPER AND FERRAL LEAD MINES.

TO BE SOLD, BY AUCTION, in the Praça of Oliveira d'Azemeis, in the kingdom of Portugal, on the 29th day of November next, in consequence of the inability of the company to find sufficient capital for the further prosecution of the works, and under conditions to be then and there mentioned, all those important MINES of PINTOR PINDELLO and FERRAL, situated near the town of Oliveira d'Azemeis, together with the valuable WATER WHEELS, PUMPING and other MACHINERY, PLANT, &c., recently put down, and in good working order.
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Full particulars may be obtained from Mr. JOHNSON, Mining Engineer, Ferral, Oliveira d'Azemeis, or at the offices of the company, 13, Pateo do Pimenta, Lisbon
Lisbon, September 28, 1875.

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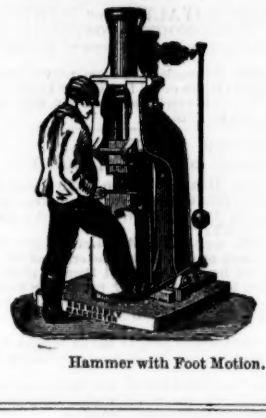

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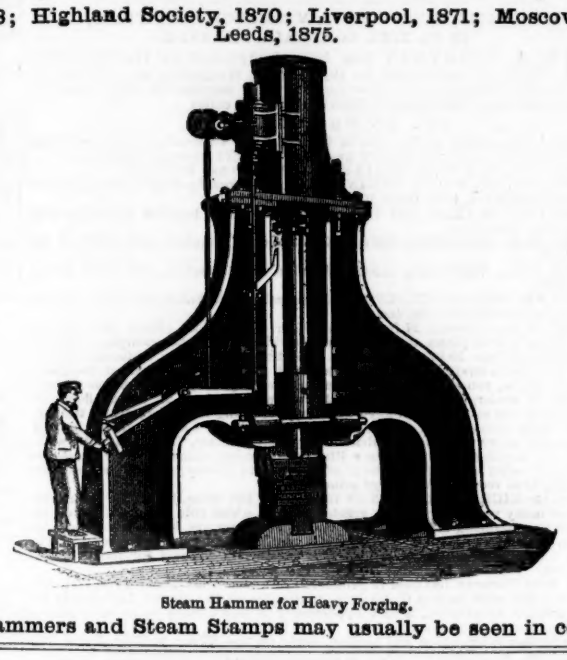

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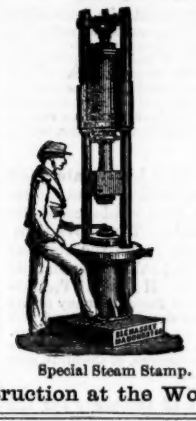

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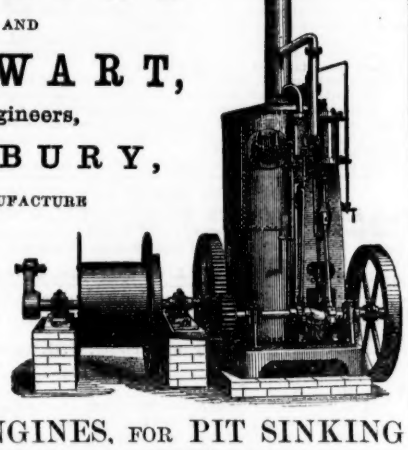

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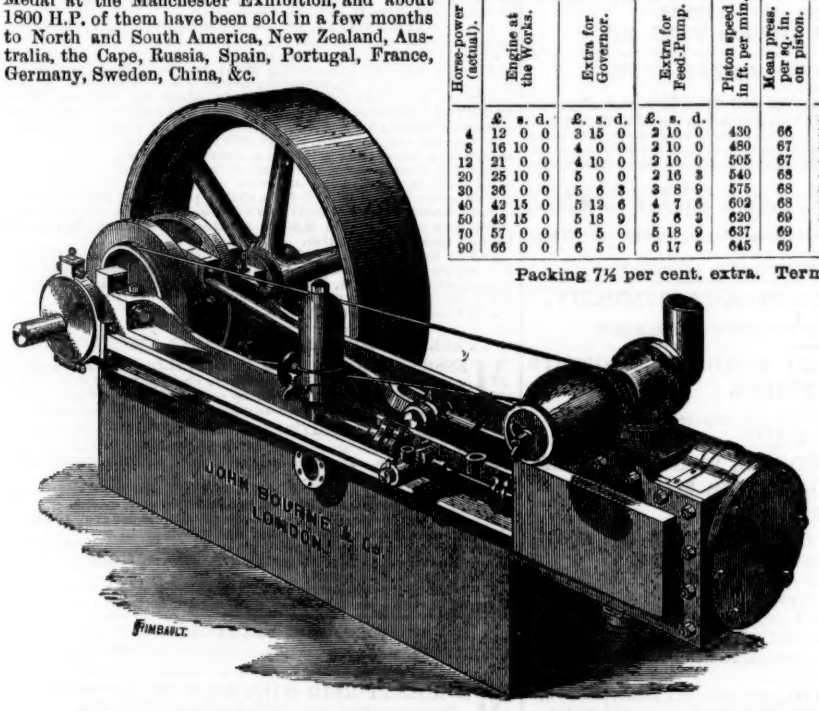

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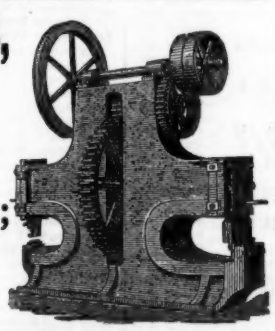

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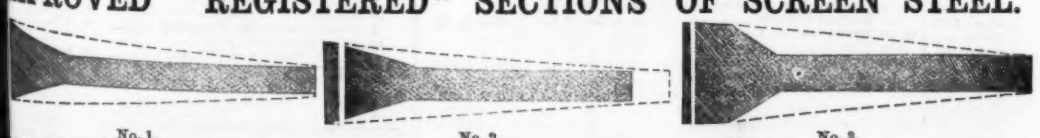

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BRITISH DIVIDEND MINES.

Shares	Mines.	Paid.	Last Pr.	Clos. Pr.	Total divs.	Per share.	Last paid
1500	Alderley Edge, *c*, Cheshire*	10 0 0	—	...	12 6 8	0 5 0	Jan. 1875
11000	Balmynheer, *l*, Wendron (4000 to is.)	1 0 0	—	...	0 2 0	0 2 0	Nov. 1875
30000	Bampfylde, *c, t*, *mn.*, Devon*	1 0 0	—	...	0 2 0	0 2 0	June 1873
5500	Blaen Caelan, *s-l*, Cardigan* (£4 sh.)	3 10 0	—	...	0 10 9	—	—
200	Botallack, *t, c*, St. Just†	116 5 0	50	40 50	619 15 0	5 0 0	Aug. 1872
10000	Bronfloyd,*† *s-l*, Cardigan	1 7 6	—	...	2 2 0	0 0 6	Jan. 1872
4000	Brookwood, *c*, Buckfastleigh	1 16 0	5	4 4¼	3 10 6	0 4 0	July 1875
3348	Cargoll, *s-l*, Newlyn§	5 13 0	¾	1¾ 2	4 16 3	0 12 6	Oct. 1872
6400	Cashwell, *l*, Cumberland*	2 10 0	—	...	1 9 6	0 2 0	Aug. 1875
1000	Carn Brea, *c, t*, Illogan†	35 0 0	60	57½ 60	308 0 0	1 0 0	Feb. 1874
6000	Cath. & Jane, *l*.* Penrhyndendraeth	5 0 0	—	...	0 7 6	0 7 6	June 1873
2450	Cook's Kitchen, *t*, Illogan†§	21 9 9	8½	8 8¼	11 17 0	0 7 6	Jan. 1873
10240	Devon Gt. Consols, *c*, Tavistock†* §	1 0 0	3½	3 3¼	116 10 0	0 12 0	May 1872
4296	Dolcoath, *c, t*, Camborne	10 14 10	42	47 48	107 6 8	0 10 0	Aug. 1875
6500	Drake Walls, *t, c*, Calstock	6 0 0	1½	1 1½	0 2 0	0 2 0	July 1874
10000	East Balleswidden, *t*, Sancreed*	1 0 0	—	...	0 2 11	0 0 5	Feb. 1874
6144	East Caradon, *c*, St. Cleer†	2 14 6	2¼	2 2¼	14 19 0	0 2 0	Oct. 1872
300	East Darren, *l*, Cardiganshire	32 0 0	—	...	230 10 0	1 0 0	Sept. 1875
6400	East Pool, *t, c*, Illogan	0 9 9	15¾	15 15¼	13 18 3	0 4 6	Sept. 1875
1906	East Wheal Lovell, *t*, Wendron*†...	5 19 0	8½	7½ 8½	20 7 6	0 7 6	Oct. 1874
2800	Foxdale, *l*, Isle of Man*†	25 0 0	—	...	81 15 0	0 10 0	Sept. 1875
40000	Glasgow Cara., *c** [30,000 £1 p., 10,000 15s. p.]	...	1¼	1¼ 1½	0 8 4	0 1 0	Sept. 1875
15000	Great Laxey, *l*, Isle of Man*	4 0 0	17½	16 16¼	18 13 0	0 10 0	Oct. 1875
25000	Great West Van, *t*, Cardigan*	2 0 0	⅜	¼ ⅜	0 2 0	0 1 0	Aug. 1874
5908	Great Wheal Vor, *t, c*, Helston†§	41 2 6	1	¾ 1	15 19 6	0 2 6	June 1872
6400	Green Hurth, *l*, Durham*	0 8 0	4½	4¼ 4¾	1 12 0	0 4 0	Oct. 1874
20000	Grogwinion, *l*, Cardigan*	2 0 0	3½	3¼ 3¾	0 3 0	0 1 0	Aug. 1875
9830	Gunnislake (Clitters'), *t, c*	5 5 0	1¼	1 1¼	0 7 3	0 1 6	June 1875
1024	Herodsfoot, *l*, near Liskeard†	8 10 0	3¼	3 3¼	62 5 0	0 15 0	Oct. 1872
18000	Hingston Down, *c*,Calstock*† (£1 sh.)	2 5 0	1⅛	⅜ 1⅛	4 3 0	0 5 0	Dec. 1872
25000	Killaloe, *si*, Tipperary	1 0 0	—	...	0 3 11½	0 0 6	Mar. 1873
400	Lisburne, *l*, Cardiganshire	18 15 0	—	...	569 10 0	1 0 0	Sept. 1875
5120	Lovell, *t*, Wendron	0 10 0	—	...	0 17 6	0 1 6	Jan. 1874
11000	Melindur Valley, *l*, Cardigan*	3 0 0	2½	1¼ 2	0 7 2	0 3 7	Jan. 1875
9000	Minera Mining Co., *i*, Wrexham*..	5 0 0	7½	5 7¼	63 19 2	0 2 0	May 1875
20000	Mining Co. of Ireland, *ci, c, l**	7 0 0	—	...	0 8 0	0 3 6	July 1872
12000	North Hendre, *l*, Wales	12 2 0	3	2 2¼	1 0 0	0 2 6	Apr. 1875
2000	North Levant, *t, c*, St. Just§	1 0 0	—	...	4 13 0	0 12 0	Sept. 1873
27855	Old Treburgett,* *s-l*, ordinary shares	0 10 0	⅜	⅛ ⅜	0 0 9	0 0 9	Feb. 1874
9258	Old Treburgett,* *s-l* (10 per ct. pref.)	9 17 0	6½	6 6½	0 1 4½	0 0 6	July 1874
9530	Pedn-an-drea, *t*, Redruth§	2 0 0	—	...	0 5 0	0 0 5	Nov. 1871
5000	Penhalls, *t*, St. Agnes	3 0 0	2	1½ 2	3 13 6	0 2 0	July 1875
45793	Penstruthal, *t, c*, Gwennap	2 0 0	⅝	⅛ ⅜	0 2 0	0 1 0	Nov. 1874
6000	Phœnix, *t, c*, Linkinhorne§	4 13 4	4½	4 4¾	39 19 10	0 4 0	Nov. 1872
1772	Polberro, *t*, St. Agnes	15 0 0	—	...	1 12 6	0 5 0	Mar. 1872
18000	Prince Patrick,* *s-l*, Holywell	1 0 0	3½	2½ 3¼	0 11 6	0 2 6	July 1875
1120	Providence, *t*, Lelant†§	16 16 7	3¼	3 4	104 12 6	0 10 0	Sept. 1872
2000	Queens, *s-l*, Holywell*	2 0 0	—	...	0 2 0	0 2 0	Sept. 1874
12000	Roman Gravels, *l*, Salop*	7 10 0	—	...	5 7 6	0 8 6	Sept. 1875
10000	Shelton, *ci, t*, St. Austell	1 0 0	12½	12¾ 12¾	0 1 0	0 1 0	Feb. 1872
512	South Caradon, *c*, St. Cleer	1 5 0	110	130 150	722 0 0	2 0 0	Sept. 1875
5000	South Carn Brea, *c, t*, Illogan§	2 13 6	2	1¾ 1¾	0 10 0	0 2 6	July 1872
6123	South Condurrow, *t,c*, Camborne]...	6 5 6	6¾	6 6¼	1 7 6	0 5 0	July 1875
6000	South Darren, *l*, Cardigan*	3 6 6	—	...	1 1 6	0 1 6	Nov. 1870
10000	So. Pr. Patrick,* *s-l*.(8000 sh. issued)	1 0 0	—	...	0 6 0	0 2 0	Apr. 1875
6771	St. Just Amalgamated, *t**	3 10 0	—	...	0 9 0	0 4 0	Nov. 1871
12000	Tankerville, *l*, Salop*	6 0 0	10¾	10¼ 11	3 18 0	0 5 0	Aug. 1875
6000	Tincroft, *c, t*, Pool, Illogan†	9 0 0	28	25 27	48 8 6	0 5 0	Aug. 1875
18000	Tretoil,* *t, i*, Bodmin	2 0 0	—	...	0 1 0	0 1 0	Mar. 1874
4000	Trumpet Consols, *t*, Helston§	7 10 0	⅛	⅛ ⅜	9 11 0	0 10 0	Nov. 1872
15000	Van, *t*, Llanidloes*	4 5 0	30	28 30	15 18 6	0 14 0	Sept. 1875
3900	W. Chiverton, *l*, Perranzabuloe†	12 10 0	16½	16½ 17½	52 17 6	0 7 6	Aug. 1875
512	West Tolgus, *c*, Redruth	95 10 0	57½	55 57½	8 10 0	1 5 0	Aug. 1875
2048	West Wheal Frances, *t*, Illogan	27 3 9	9½	9 9½	3 12 6	0 5 0	Oct. 1872
512	Wheal Basset, *c*, Illogan†	5 2 6	6½	10 12	638 10 0	1 10 0	Aug. 1872
2048	Wheal Jane, *t*, Kea	2 13 10	4	3½ 4	11 5 0	0 5 0	July 1875
4295	Wheal Kitty, *t*, St. Agnes	5 4 6	3¾	3 3¼	11 19 6	0 2 6	Dec. 1874
896	Wheal Margaret, *t*, Uny Lelant§	15 17 6	—	...	82 2 3	0 10 0	May 1872
80	Wheal Owles, *t*, St. Just§	86 5 0	170	150 170	522 10 0	4 0 0	Aug. 1872
6000	Wheal Prussia, *t*, Redruth	2 0 0	—	...	0 1 0	0 1 0	Dec. 1874
12000	Wheal Russell, *c*, Tavistock	1 0 0	—	...	0 3 3	0 0 6	Nov. 1874
10000	Wheal Whisper, *t, c*, Warleggan*...	1 0 0	—	...	0 1 6	0 0 6	May 1872
25000	Wicklow *c, sul, i*, Wicklow	2 10 0	—	...	52 9 0	0 2 6	Mar. 1872
10000	Wye Valley, *l*, Montgomery*	3 0 0	5	4½ 5½	0 6 0	0 3 0	Aug. 1875

FOREIGN DIVIDEND MINES.

35500	Alamillos, *l*, Spain*†	2 0 0	2	1¾ 1¾	1 9 9	0 2 0	Sept. 1875
30000	Almada and Tirito Consol., *s*†	1 0 0	¾	½ ¾	0 5 3	0 1 0	Mar. 1875
20000	Australian, *c*, South Australia†	7 7 6	2¾	1¾ 2¼	0 15 6	0 2 0	July 1875
10000	Battle Mountain,* *c*, (6240 part pd.)	5 0 0	1½	1 1½	0 10 0	0 0 0	Nov. 1872
15000	Birdseye Creek, *g*, California*	4 0 0	2	1¾ 2	0 14 0	0 2 6	June 1874
6000	Bensberg, *l*, Germany*	10 0 0	3	...	0 17 4	0 8 0	July 1873
12320	Burra Burra,* *c*, So. Australia	5 0 0	—	...	56 0 0	0 10 0	Oct. 1872
20000	Caps Copper Mining,*† So. Africa..	7 0 0	35	33 35	21 15 0	1 0 0	Sept. 1875
40000	Cedar Creek, *g*, California*	5 0 0	¾	⅜ ⅝	0 5 0	0 2 6	June 1873
30000	Central American Association*† ...	0 16 6	—	...	0 6 0	0 1 0	July 1869
15000	Chicago, *s*, Utah*	10 0 0	—	...	1 12 0	0 4 0	May 1875
21000	Colorado Terrible, *s-l*, Colorado*†...	5 0 0	2¾	1½ 2¼	0 13 6	0 4 0	Jan. 1875
100000	Den Pedro North del Rey*†	0 16 0	⅜	⅜ ⅝	2 5 9	0 2 0	Mar. 1872
23500	Eberhardt and Aurora, *s*, Nevada*†	10 0 0	8¾	8¼ 8½	1 0 0	0 1 0	July 1871
50000	Emma,* *g, s*, Utah	20 0 0	1¾	1½ 1¾	3 12 0	0 6 0	Dec. 1872
70000	English and Australian, *c*† B. Aust.	2 10 0	1¾	1¾ 2	2 10 9	0 2 6	Mar. 1875
15000	Ferguson, *g*, California*	2 0 0	—	...	0 3 0	0 3 0	April 1872
80000	Flagstaff, *s*, Utah*	10 0 0	1½	⅛ 1	4 2 0	0 5 0	July 1873
25000	Fortuna, *i*, Spain*†	2 0 0	5½	4¾ 5¼	5 0 10	0 6 6	Sept. 1875
30000	Gold Run, *hyd.*	1 0 0	—	...	0 2 4	0 0 4	Oct. 1872
68000	Kapunda Mining Co. Australia† ...	1 3 0	¾	⅛ ¼	0 2 4	0 0 6	June 1873
20000	Last Chance, *s*,* Utah	5 0 0	1	¾ 1¼	0 14 0	0 2 0	July 1873
15000	Linares, *l*, Spain*†	3 0 0	4½	4 4¾	15 4 2	0 5 0	Sept. 1875
65000	London and California, *g*†.....	2 0 0	⅜	⅛ ½	0 1 0	0 1 0	July 1875
7837	Lusitanian, Portugal*† (£5 shares).	3 10 0	1¾	¾ 1¾	1 11 6	0 1 6	Mar. 1873
15000	Mammoth Copperopolis of Utah, *c*, s	10 0 0	—	...	0 5 0	0 5 0	Dec. 1872
5000	Mountain Chief, *s*, Utah*	10 0 0	—	...	0 4 0	0 4 0	Jan. 1873
18000	Prussian Mining & Ironworks, *ci, i*.	30 0 0	—	...	6 0 0	3 0 0	July 1873
10000	Pontgibaud, *s-l*, France†	20 0 0	20	...	19 11 0	0 11 10	June 1875
100000	Port Phillip, *g*, Clunes*†	1 0 0	1	⅝ ¾	1 8 0	0 1 0	Jan. 1872
54000	Richmond Consols, *s*, Nevada*† ...	5 0 0	9½	9 9¼	2 14 0	0 7 6	May 1875
120000	Scottish Australian Mining Co.*†..	1 0 0	1½	1¼ 1½	12½ per cent.		May 1875
112500	Sierra Buttes, *g*, California*†	2 0 0	1¾	1¾ 1¾	1 12 0	0 2 0	Oct. 1875
60000	South Aurora, *s*, Nevada*	5 0 0	¼	⅛ ¼	0 14 2	0 0 2	Nov. 1873
£253000	St. John del Rey*† (£5 stock and multiples dealt in)	...	390	400	..20 p. ct. for ½ year		June 1875
15000	Sweetland Creek, *g*, California*† ...	4 0 0	3	2½ 3	3 2 0	0 2 0	Sept. 1875
20000	Tolima, *g, s*" (6000 sh. are £5 f. pd.)	4 10 0	3¾	3 3¼	0 11 6	0 6 6	May 1874
15000	Western Andes, *s*,* New Granada...	5 0 0	5½	5 5¾	2 13 0	0 3 0	Sept. 1875

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Clos. Pr.	Last Call.
30000	Anglo-Australian, *g*, Victoria*	2 10 0	—	...	...Sept. 1872
3000	Bellavista, *s*, Peru* (£10 shares)	10 0 0	—	...	...Fully pd.
30000	Blue Tent, *hyd.*, California	5 0 0	5¼	4½ 5	...Fully pd.
50000	Braganza, *g*, Brazil*†	0 15 0	—	...	...Oct. 1870
12000	Camp Floyd, *s*, Utah*	10 0 0	—	...	...Fully pd.
35000	Cesena Sulphur Company, Romanga, Italy*	10 0 0	—	...	...Fully pd.
50152	Chontales, *g, s*, Nicaragua*† (and 12,542 of £1 15s.)	2 0 0	—	...	...Fully pd.
6000	Clifton, *s*, Colorado*	5 0 0	—	...	...Feb. 1872
10000	Crescent, *g*, Plumas County, California*	10 0 0	—	...	...Fully pd.
100000	Culaba, *g*, Minas Geraes, Brazil*	0 17 6	—	...	...June 1872
10000	Douglas, *s*, Georgetown, Col.	5 0 0	—	...	...Fully pd.
35000	Excelsior Hydraulic Gold Washing Co., California*	6 0 0	—	...	...Dec. 1871
60000	Exchequer, *g, s*, California*	1 0 0	—	...	...Fully pd.
55000	Frontino and Bolivia, *g*, New Granada*†	2 0 0	1½	1⅝ 1¾	...Fully pd.
50000	General Brazilian, *g**	1 0 0	—	...	...Fully pd.
10000	Goetzel Tunnel Co., Georgetown, Col.	7 0 0	—	...	...Fully pd.
40000	Holcombe Valley, *g*,* California	1 0 0	1	... ¾	...July 1873
6000	Hornachos,* *s-l*, (£10 shares) Spain	10 0 0	—	...	...Jan. 1874
20000	Imperial Brazilian Collieries, Brazil*	5 0 0	—	...	...Fully pd.
20000	Independence, *g*, California*	5 0 0	3	... ¾	...Fully pd.
20000	I. X. L., *g, s*, California*	5 0 0	—	... 2½ 3	...Fully pd.
50000	Javali, *g*, Nicaragua*	2 0 0	⅝	... ½ ⅝	...Fully pd.
12000	Lanestosa,* *i, z*, Viscaya, Spain (£2 shares)	1 12 6	—	...	...Sept. 1874
75000	Malabar, *g*, Colombia* (65000 issued)	1 0 0	...	⅝ ⅝	...Fully pd.
4000	Malaga, *i*, Spain*	10 0 0	—	...	...Fully pd.
40000	Malpaso, *g*, Colombia* (10000 pref. shares, fully paid)	1 0 0	...	⅝ ⅝	...Fully pd.
12000	Menzenberg, *c*, Honnef, Germany*	5 5 0	—	...	...Fully pd.
6000	Monte Loreto, *g, c*, Italy*	5 0 0	—	...	...Fully pd.
15000	New Pacific, *g, s*, Nevada*	0 10 0	...	⅛ ⅛	...Dec. 1874
66000	New Quebrada, *c*, Venezuela*	5 0 0	...	3½ 3½	...Fully pd.
50000	New Rosario, *s*, Mexico*	1 0 0	...	⅛ ⅛	...Fully pd.
20000	New Zealand Kapanga, *g*, Coromandel*	5 0 0	1	... ⅛ 1	...Fully pd.
10000	Newfoundland,* *i*	10 0 0	—	...	...Fully pd.
20000	North American, *g**	4 0 0	—	...	...Fully pd.
5000	Panulcillo, *c*, Chili*† (£80000 debentures)	4 0 0	1½	... ¾ 1¼	...Fully pd.
80000	Pestarena United, *g*, Italy*†	3 0 0	...	⅛ ⅜	...Fully pd.
50000	Rica, *g*, Colombia* (40000 issued)	1 0 0	...	⅛ ⅜	...Fully pd.
60000	Rio Tinto,* *c*, Huelva, Spain	10 0 0	6½	... 5½ 6½	...Fully pd.
60000	Rossa Grande, *g*, Brazil*† (£1 shares)	0 19 0	—	...	...July 1872.
32500	Ruby Consolidated, *s*, Nevada*	10 0 0	—	...	...Fully pd.
30000	Russia, *c*, Orenburg and Uta*†	10 0 0	3¼	... 2½ 3	...Fully pd.
25000	San Pedro, *c*, Chili*	2 0 0	—	...	...Fully pd.
40000	Santa Barbara,* *g*, Brazil	0 9 6	...	⅛ .. ¾ 1	...Mar. 1872
10000	Silver Plume, *s*, Colorado*	1 0 0	—	...	...Fully pd.
37500	Snowdrift, *s*, Colorado*	2 0 0	—	...	...Fully pd.
26000	St. Lawrence, *g*,* California	5 0 0	—	...	...Fully pd.
30000	Tecoma, *s*, Utah*	10 0 0	...	⅛ ⅛	...Fully pd.
20000	Thornhill Reef, *g*, Australia*	1 0 0	...	⅛ ⅛	...Fully pd.
43174	United Mexican, *s*, Mexico*†‡	28 12 8	..	3½ .. 3 3¼	...May 1875
14000	Utah, *g, s-l*, Utah*	5 0 0	...	⅛ ⅛	...Fully pd.
25000	Victoria (London)*, *g*, Australia (25,000 sh. 16s. pd.)	1 0 0	—	...	...Fully pd.
75000	Yorke Peninsula, *c*, South Australia	1 0 0	...	⅛ ⅛	...Fully pd.
40000	Yorke Peninsula, *c*, South Australia Preference	1 0 0	1	... ⅛ 1	...Fully pd.

§ Have made calls since last dividend was paid.

NON-DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Clos. Pr.
25000	Aberdaunant, *l*, Llanidloes*	1 0 0	1¾	1½ 1⅝
10000	Aberystwith,* *s-l*, Cardigan	5 0 0	...	...
18000	Ambrose Lake, *t, c*, Liskeard	1 18 6	2¾	2½ 2¾
12000	Asheton, *l*, Carnarvonshire*	5 0 0	1¼	... ¾ 1¼
50000	Ballycummisk,* *c*, Schull	2 0 0	—	...
12000	Bedford Consols, *c*, Tavistock	1 8 0	—	...
12000	Bedford United, *c*, Tavistock	1 17 6	1	... 1 1¼
28000	Belstone,* *c*, Devon (25,000 fully pd.)	1 0 0	2½	... 2 2½
15000	Blue Hills, *t, c*, St. Agnes	2 6 6	—	...
25000	Bog, *i*, Shropshire*	2 0 0	⅜	... ⅛ ⅜
2000	Bowden Hill,* *mn*	1 0 0	—	... ⅜ ¾
20000	Brynambor, *l*, Cardigan	1 0 0	—	...
30000	Burrow& Butson,* *t, c, bi*, St. Agnes	1 0 0	—	...
20000	Burra Burra,* *t, c, bi*, Kenwyn	1 0 0	—	...
4828	Bwadrain, *s-l*, Cardigan* (£4 shares).	3 19 0	—	...
4235	Bwlch Consols, *s-l*, Cardigan*† (£5 sh.)	4 19 6	—	...
12000	Cae Gynon, , Cardiganshire*†	2 0 0	—	...
30000	Caldbeck Fells, *l*, Cumberland*	2 0 0	—	...
600	Carden* (£10 shares)	4 0 0	—	...
5584	Carn Camborne, *c, t*, Camborne	5 3 6	⅛	... ⅛ ⅛
10000	Castle Gate, *t*, St. Colomb*	1 0 0	—	...
10000	Cathedral, *t, c*, Gwennap*	1 10 0	1¼	...1¼ 1⅜
3000	Cefn Brwyno (lim. to £5)	5 0 0	—	...
20000	Central Foxdale, *l*, Isle of Man*(£2 sh.)	1 0 0	—	...
10000	Central Van,* *i, bi*, Llanidloes	5 0 0	—	...
24000	Court Grange, *s i*, Cardiganshire	1 0 0	—	...
15000	Cwm Bychan,* *s.l*, Montgomery	1 0 0	—	...
15000	Cwm Nant Ddu,* *l*, Montgomery	1 0 0	—	...
10000	Cwm Ricket and Maesnant, *l*, Mont.*	2 11 0	—	...
256	Cwmystwith, *l*, Cardiganshire]	60 0 0	—	...
15000	Deer Park, *t, c*, Tavistock	2 0 0	—	...
10000	Denbighshire Consolidated, *l**	3 0 0	3	... 2 3
656	Ding Dong, *t*, Gulval	49 14 6	6	...
12000	Dolwen Consols, *l*, Cardigan*	1 0 0	—	...
10000	Dubby Syke, *l*, Durham*	0 5 0	1	... 1
10000	Duchy Great Consols, *c*, Calstock	5 0 0	—	...
15000	Dyliffe,* *l*, Montgomeryshire	6 0 0	—	...
512	East Basset, *c*, Redruth†]	76 15 0	4	... 3 4
800	East Black Craig,* *l*., Scotland	25 0 0	—	...
3000	East Boscaswell, *t*, St. Just	5 0 0	—	...
6000	East Bottle Hill Cons., *t, c*, Plympton	3 0 0	—	...
4000	East Chiverton, *l*, Perranzabuloe	6 5 0	1⅜	...1¼ 1¾
3000	East Dolcoath, *t*, Illogan	10 0 0	—	...
6000	East Grenville, *c*, Camborne	7 8 6	⅛	... ⅛ ⅛
4000	East Gunnislake and So. Bedford, *c*..	13 13 0	—	...
30000	E. Nant-y-mwyn,* *l*, Brecknockshire.	1 0 0	—	...
15000	East Van, *i*, Llanidloes*	5 0 0	1⅝	...1¾ 1⅝
20000	Elgar,* *s-l*, Cardiganshire	1 0 0	1	... ¾ 1
5000	Flintshire,* *i*	6 0 0	—	...
12800	Florence and Tonkin United* *l*.	0 10 0	—	...
10000	Franco Consols, *t, c*"	1 0 0	—	...
5000	Frank Mills, *l*, Christow	4 16 0	⅜	... ⅛ ⅜
8000	Fronvellan, *l*, Mont.* [4000 sh. fy. pd.]	1 0 0	—	...
18000	Furze Hill,† Tavis.*	1 0 0	—	...
3950	Gawton, *c*, Tavistock	4 1 6	⅝	... ⅛ ⅝
5000	Gem, *t*, Whitechurch	2 10 0	—	...
12500	Gilfach, *s-l*, Llangadock	2 10 0	—	...
10000	Glan Severn, *s-l*, Flintshire	1 0 0	—	...
15000	Gobbett, *t*, Dartmoor	1 0 0	—	...
12000	Goginan, and Level Newydd, Card., *l*	2 10 0	—	...
100000	Gold, *g*, Merionethshire	1 0 0	⅛	... ⅛ ⅛
7500	Gorsedd and Merlyn Consols, *l*, Flint	2 10 0	—	...
20000	Gt. East Foxdale, *l*, I. of Man* (£1 sh.)	0 13 0	—	...
4096	Great Caradon, *c, t*, St. Ive	5 17 6	—	...
10000	Great Mountain, *s-l*, Carnarvon*	1 0 0	—	...
9500	Great Pant-y-Pydew, *l*, Holywell	2 0 0	2¼	... 2 2½
2000	Great Retallack, *s-l*, *b*, Perranzabuloe	3 8 0	—	...
4096	Great Wh. Lovell, *t*, Wendron	3 14 0	—	...
18000	Grosvenor, *l*, Holywell (£1 sh.)	0 7 0	—	...
200	Islay, *l*, Scotland*	10 0 0	—	...
6000	Keswick United, *l**	5 0 0	—	...
4000	Killifreth, *t*, Chacewater	1 2 0	1½	...
25000	Kingston Consols, *s-l*, Cornwall	1 0 0	1¾	...1⅝ 1¾
12000	Ladywell,* *i*, Salop	2 10 0	2¾	...2¾ 2¾
2500	Levant, *c, t*, St. Just	9 1 6	—	...
10000	Llanarmon, Denbigh	2 0 0	—	...
64	Llandilo, *s-l*, *bl*, Flintshire	50 0 0	—	...
14000	Llanidloes, *i*, Montgomery*	3 0 0	3½	... 3 3½
15000	Llanlivery Cons., *t, c, ars*, Llanlivery.	1 0 0	1¾	...1⅝ 1¾
25000	Llanrhaiadr, *i*, Montgomery*(£2 sh.)	1 0 0	—	...
30000	Llanrwst, *i*, Carnarvon	2 0 0	2½	...2¼ 2½
17000	Llywernog, *l*, Cardiganshire	0 16 0	—	...
9000	Marke Valley, *c*, Caradon*	5 0 6	3¾	..2⅞ 3⅛
6000	Medlyn Moor, *t*, Wendron	1 4 10	1¾	..
8000	Mellanear, *c*, Hayle*	4 0 0	—	...
13000	Monydd Gorddu, *i*, Cardigan*	5 0 0	6½	... 6 6½
2524	Nangiles, *t, c*, Kea	9 14 0	⅜	... ⅛ ⅜
4000	Nanty, *i*, Montgomeryshire*	1 0 0	—	...
20000	Nanty Moch, *s-l*, Llanbadarnfawr	1 0 0	1	... 1
2000	Nant-y-Ricket,* *c, i*, Montgom.	5 0 0	—	...
25000	Nant-y-Ronen, *s-l*, Cardigan*	1 0 0	—	...
10000	New Beldon, *i*, Northumberland*	1 0 0	—	...
12000	New Caroline, *c*, Perranuthnoe	1 0 0	1½	...
20000	New Consols, *c*, Tavistock*	3 0 0	1¾	... 1 1¾
8000	New Crickheath,* *l*, Shropshire	2 0 0	2½	... 2 2½
8000	New Dolcoath, *t, c*, Camborne*	3 0 0	1⅝	... 1 1⅝
15000	New Fowey Consols, *t*, St. Blazey*	3 0 0	2	... 1½ 2
4096	New East Lovell, *t*, Wendron	0 10 0	—	...
2000	New Hendra, *t*, Breage	2 9 0	1¾	... 1½ 1¾
15000	New North Tamar,* *s-l*, Beerferris	2 0 0	—	...
6400	New Pembroke, *t, c*, Par Station	5 4 6	1	... ¾ 1
5000	New Rosewarne, *c*, Gwinear	5 7 0	¾	... ⅛ ¾
3200	New South Merliyn, *l*, Flint*	2 10 0	—	...
5000	New St. Blazey,* *t*, Cornwall	0 17 6	—	...
4000	New Wh. Grylls, *t*, Perranuthnoe	0 16 6	—	...
1200	New Wh. Seton, *c*, Camborne	36 16 8	—	...
512	North Busy, *c*, Chacewater	3 9 6	9½	... 8 9
25000	North Laxey,* Isle of Man	2 0 0	⅜	... ⅛ ⅜
20000	North Prince Patrick,* *l*, Holywell	1 0 0	1¾	.. 1 1¾
2000	North Wheal Towan, *t, c*, Illogan	1 19 6	...	...
10000	North Pool,* *c* (Res. 2500, Deb. 5000*l.*)	2 0 0	⅜	... ⅛ ⅛
1000	North Rosewarne, *c*, Gwinear	6 12 6	—	...
8000	North Treleigh Wood, *t*, Redruth*	1 0 0	1¾	... 1 1¼
5936	North Treskerby, *c*, St. Agnes	3 15 4	...	...
2000	Old Batholes,* , Salop	1 10 0	—	...
6000	Old Talargoch, *l*, Flintshire*	2 0 0	—	...
2500	Old Tincroft, *c, t*, Lelant*	4 0 0	4¾	...4½ 4¾
16923	Parys Mountain,* *c*, Anglesea	3 0 0	⅜	... ⅛ ⅜
4000	Pateley Bridge, *l*, Yorkshire	5 0 0	6⅛	...